

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

JOHN CHART,

Plaintiff,

v.

TOWN OF PARMA,

Defendant.

DECISION & ORDER

10-CV-6179P

PRELIMINARY STATEMENT

Plaintiff John Chart (“Chart”) has sued defendant Town of Parma (the “Town”) over alleged contamination of the Town Park (the “Park”) with topsoil containing unsafe levels of arsenic, lead, DDT, DDD and DDE. (Docket # 12). Chart has sued under the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. § 6972(a)(1)(B).¹ Chart seeks an injunction requiring the Town to remediate the contamination, as well as response costs, attorneys’ fees and other expenses.

According to the Complaint, in 2003 the Town purchased 1086 cubic yards of topsoil from Crowley Development Corporation (“Crowley”) to make improvements to the Park. (*Id.* at ¶ 21). The topsoil that Crowley sold to the Town originated in a former apple orchard. (*Id.* at ¶¶ 19, 21). Pesticides including arsenic, lead, DDT, DDE and DDD were allegedly used in the orchard, resulting in contamination of the soil. (*Id.* at ¶ 20). The Town used the soil it

¹ Chart’s second amended complaint also asserted a RCRA cause of action under 42 U.S.C. § 6972(a)(1)(A), which was previously dismissed by this Court. (Docket # 55).

purchased from Crowley to backfill the Park's football, baseball and other multi-use fields. (*Id.* at ¶¶ 18-24).

Currently pending before the Court is the Town's motion to preclude the testimony of Chart's expert James D. Okun ("Okun"), LSP, and for summary judgment. (Docket # 65). Chart opposed the motion and filed an affidavit sworn by Okun (the "Okun Affidavit"), a supplemental report authored by Okun (the "Second Okun Report") and an affidavit sworn by Chart's other expert David D. Day ("Day") (the "Day Affidavit"). (Docket ## 69-25, 69-40, 69-41). Also pending before the Court is the Town's motion to strike the Okun and Day Affidavits and the Second Okun Report. (Docket # 70).

I. The Town's Motions to Preclude Okun and to Strike the Second Okun Report and Okun's and Day's Affidavits

A. The Expert Reports and Affidavits

1. Okun's First Report and Testimony

Okun is an environmental chemist and toxicologist. (Docket # 65-10 at 2). He received an undergraduate degree in chemistry from Massachusetts Institute of Technology in 1975, and three years later he obtained his master's degree in toxicology from the same institution. (*Id.* at 14). Okun has worked in the environmental field for the past thirty years performing assessments of chemicals in the environment and their potential impact on human health. (*Id.* at 2, 14). According to his report, Okun was retained by Chart to provide an analysis and opinion "regarding the potential for health and environmental risks arising from arsenic concentrations" at the Park. (*Id.* at 2). To do this, Okun reviewed the history of the alleged contamination of the topsoil and its placement at the Park on the football field and other locations. (*Id.* at ¶¶ A-C). Okun's report is dated April 30, 2013. (*Id.* at 13).

Okun reviewed the results of soil sampling performed on the soil of the Park's football field. (*Id.* at ¶¶ E-G). According to Okun, those results indicated that arsenic levels in the football field were five to ten times greater than the expected background concentration of arsenic of between five to ten parts per million ("ppm"). (*Id.* at ¶¶ F-G, M). Okun also visited the Park and photographed the football field. (*Id.* at ¶ J and Exhibit ("Ex.") D). According to Okun, most areas of the football field were covered by grass; however, the field contained some spots that were either completely bare or only sparsely covered with grass. (*Id.* at ¶ K).

Okun's report explains the adverse health effects associated with arsenic exposure, including an increased risk of cancer. (*Id.* at ¶¶ M-W). Okun also identified regulations promulgated by the New York Department of Environmental Conservation ("DEC") applicable to arsenic contamination. (*Id.* at ¶¶ X-AA). In addition, Okun identified a recent report authored by the New York State Department of Health ("DOH") that determined that arsenic concentration levels of less than 1.0 ppm were associated with a one in one million cancer risk level.² (*Id.* at ¶ AA). According to the report, because background levels of arsenic in soil typically exceed 1.0 ppm, the DOH recommends that arsenic remediation goals should be evaluated by reference to the expected background concentration. (*Id.*).

Okun's report next calculated the exposure point concentration for arsenic at the football field. (*Id.* at ¶¶ BB-DD). According to Okun, the "exposure point concentration" for a particular site is a "reasonable estimate of the average concentration of a hazardous constituent that a receptor is likely to be exposed to over a number of individual exposure events." (*Id.* at 9). Okun used a 95% upper confidence limit to calculate the exposure point concentration. (*Id.* at

² Both Okun and the Town's expert Christopher Andrew Ollson ("Ollson"), PhD, express cancer risk probabilities in scientific notation. Thus, a risk of one in one million is expressed as 1×10^{-6} . "[A]n excess lifetime cancer risk of 1×10^{-6} indicates that an individual experiencing the reasonable maximum exposure estimate has a 1 in 1,000,000 chance of developing cancer as a result of site-related exposure." *United States v. Akzo Nobel Chems., Inc.*, 2001 WL 303106, *51 (S.D. Ala. 2001). "This is referred to as an 'excess lifetime cancer risk' because it would be in addition to the risk of cancer individuals fac[e] from other causes." *Id.*

¶ CC). Okun calculated the exposure point concentration using the results from the soil sampling at the Park. (*Id.* at ¶ DD). According to Okun, he calculated that the exposure point concentration was approximately 53.87 mg/kg of arsenic in the soil at the football field. (*Id.*).

Next, Okun attempted to identify the “receptors,” or the people, who were most likely to be exposed to the soil at the Park. (*Id.* at ¶¶ EE-GG). According to Okun, likely receptors included individuals playing on the field, spectators and anyone else using the field. (*Id.* at ¶ EE). In addition, Okun opined that because arsenic does not degrade over time, potential future uses of the football field should be considered, including the field’s potential future use for residential or school grounds purposes. (*Id.* at ¶ FF).

Okun also evaluated the likely dose range associated with arsenic ingestion. (*Id.* at ¶ HH). According to the report, Okun calculated that the dose range from oral ingestion was 4.885 to 10.77 micrograms of arsenic per day. (*Id.* at ¶ II). In his report, Okun indicated that the lower number represented the likely daily dose of arsenic for a child using the football field as a football field. (*Id.*). The higher number represented the likely daily dose if the field were used as residential property. (*Id.*).

Next, Okun calculated the non-carcinogenic health risk resulting from exposure to soil in the football field. (*Id.* at ¶ JJ). To do this, Okun identified that reference dose for arsenic as 3×10^{-4} mg/kg per day. (*Id.*). For a child who weighs 20 kg, Okun opined, any dose in excess of 6 micrograms per day would likely pose a significant non-carcinogenic risk. (*Id.*).

Okun also calculated the carcinogenic health risk resulting from exposure to the arsenic levels in the soil at the football field. (*Id.* at ¶ KK). According to Okun, the cancer risk is calculated using the cancer slope factor promulgated by the United States Environmental Protection Agency (“EPA”). (*Id.*). For arsenic, the cancer risk factor is 1.5 mg/kg per day. (*Id.*).

According to Okun, using this number, an excess lifetime cancer risk of 1 in 10,000 would be associated with ingestion of approximately 4 micrograms of arsenic per day. (*Id.*). Having calculated both the carcinogenic and non-carcinogenic risks, Okun opined that the concentrations of arsenic in the soil at the Park exceed the safe levels for both risks. (*Id.* at ¶ LL).

Okun concluded that under New York regulations the arsenic concentrations in the football field at the Park would be considered a hazardous substance and would require remediation with an objective of reducing the concentrations to 13ppm. (*Id.* at ¶¶ MM & NN). According to Okun, New York regulations provide that 13ppm is the appropriate risk-based cleanup objective to protect ecological resources from arsenic concentrations. (*Id.* at ¶ PP). Thus, Okun concluded that the arsenic concentrations at the Park, which are approximately four times greater than the objective, present a potential hazard to the environment. (*Id.* at ¶¶ NN & SS). He further concluded that the arsenic concentrations were likely to cause physical injury or illness to humans. (*Id.* at ¶ RR). Okun opined that the arsenic contaminated topsoil at the Park poses an imminent and substantial threat to human health or the environment and that remediation was “urgently necessary.” (*Id.* at ¶ UU).

During his deposition, Okun testified that he generally employs the same methodology whenever performing a quantitative risk assessment analysis. (Docket # 65-11 at 7). First, he attempts to determine the nature and extent of contamination at the relevant site through sampling and testing of the soil. (*Id.*). Next, he performs an exposure assessment consisting of two steps. (*Id.*). The first step involves calculating the exposure point concentration, which is the amount of contaminant to which potential receptors will be exposed. (*Id.*).

Next, he attempts to determine how potential receptors will be exposed to the contaminant. (*Id.* at 8). According to Okun, this can be done in two ways. (*Id.*). The first way is to conduct a baseline risk assessment that assumes that the site in question is not under any particular use restrictions. (*Id.*). Thus, the baseline risk assessment calculates the maximum reasonable exposure, assuming that the site is used as a residential property. (*Id.*). Okun testified that in addition to conducting a baseline risk assessment that assumes no site-specific limiting assumptions, a risk assessment may also account for site-specific limitations actually implemented at a site. (*Id.*). To do this, instead of using a residential-exposure scenario, a particular site may be assessed with reference to the actual use by the owner and account for those use limitations when calculating the exposure risk. (*Id.* at 8-9).

Okun testified that he also conducts a toxicity assessment, which quantifies the toxic effects of the contaminants at issue. (*Id.* at 8). According to Okun, he attempts to quantify both non-carcinogenic and carcinogenic risks. (*Id.*). After conducting an exposure assessment and a toxicity assessment, the results of both are used to derive a risk characterization, which determines whether there is a significant risk resulting from the exposures. (*Id.*). According to Okun, for non-carcinogenic effects, a hazard index is used to assess the risk. (*Id.*). Okun testified that a non-carcinogenic risk in excess of one is considered to be a significant risk. (*Id.*). With respect to carcinogenic risks, according to Okun, risks exceeding one in one million (1×10^{-6}) are considered to be “of concern” in New York State. (*Id.*).

In this case, according to Okun, he performed a quantitative risk assessment. (*Id.* at 9). First, he developed the exposure point concentration for arsenic in the soil at the Park, which he calculated to be 53.8 mg/kg. (*Id.*). Next, he identified potential receptors, including children and spectators at the football field. (*Id.* at 10). According to Okun, he performed a

baseline risk assessment that attempted to determine the risks posed by potential exposure through oral ingestion of the soil contained at the Park. (*Id.* at 9-10). Okun testified that his assessment was the most conservative scenario because it assumed that the Park would be used as a residential property in the future and that potential receptors would be exposed 350 days each year for thirty years. (*Id.* at 11, 22).

According to Okun, he calculated the likely arsenic dose range for potential receptors to be between 4.885³ and 10.77 micrograms of arsenic per day. (*Id.* at 12). Okun testified that the dose range calculation of 4.885 micrograms represents the daily dose a child likely would ingest if he used the football field in accordance with its current use as a football field. (*Id.* at 17-18). The higher daily dose calculation of 10.77 micrograms represents the expected daily dose a child would ingest if the football field were used as residential property.⁴ (*Id.*). Okun testified that in making this calculation he used the EPA Exposure Factors Handbook, which provided expected ingestion rates of 100 milligrams per day for children using the field for recreational purposes and 200 milligrams per day for children using the field for residential purposes. (*Id.*).

Next, Okun identified the reference dose for arsenic provided in the EPA IRIS data. (*Id.* at 13). According to Okun, the reference dose is 3×10^{-4} mg/kg per day. (*Id.*). Okun testified that this dose represents a threshold level of exposure above which the EPA would

³ According to Okun, this number was derived using the 95% upper confidence level mean for soil samples taken by Chatfield Engineers and did not include the soil samples taken by Chart. (*Id.* at 17).

⁴ Okun's testimony about his calculations for the arsenic dose range was inconsistent. When he was first asked about his dose range calculation, Okun testified that the lower range number of 4.885 micrograms would be the likely dose for an adult, who would ingest 100 milligrams of soil each day. (*Id.* at 12-13). Okun further testified that the upper range number is the likely dose for a child, who would ingest approximately 200 milligrams of the Park soil per day. (*Id.*). This testimony was apparently inaccurate because it is inconsistent with Okun's report and with his subsequent deposition testimony in which he clarified that none of his calculations assumed adult receptors. (Docket # 65-10 at ¶¶ HH and II; Docket # 65-11 at 17-18). Of course, Okun's inconsistent testimony is proper fodder for cross-examination.

expect a higher probability of an adverse non-carcinogenic health risk effect. (*Id.*). According to Okun, for children, the dose reference for arsenic is 6×10^{-3} , the equivalent of 6 micrograms per day. (*Id.*). Okun testified that under his calculations, the expected exposure to the football field under its current use would not produce an unacceptable non-cancer risk for children. (*Id.* at 18).⁵

Okun testified that the cancer slope factor (“CSF”) is a parameter that the EPA uses to express the carcinogenic potency of chemicals. (*Id.* at 13). According to Okun, he used a CSF of 1.5 mg/kg per day. (*Id.*). Using that CSF, Okun calculated that the amount of arsenic that a child could be exposed to per day that would correspond to a 1 in 10,000 (1×10^{-4}) risk of cancer is 4 micrograms of arsenic per day.⁶ (*Id.* at 14). Thus, Okun opined that were the field used as a football field there would be an excess cancer risk greater than 1 in 10,000 for a child. (*Id.* at 18). Okun testified that none of the calculations expressed in his report assessed the cancer or non-cancer risks in adults. (*Id.*). According to Okun, his calculations assumed that a child weighed 20 kilograms; for adults, who weigh more than children, the cancer risk due to exposure to the arsenic in the soil would be less than the risk for children. (*Id.*).

Okun opined that the elevated arsenic concentrations at the Park are likely to cause illness to humans. (*Id.* at 22-23). According to Okun, the EPA and other regulatory agencies consider a contaminant to be a risk if expected exposure results in an excess cancer risk

⁵ Again, Okun offered conflicting testimony on this point. He originally testified that his calculations demonstrated that the expected exposure to the football field would not produce a non-cancer risk for adults, although it would for children (*Id.* at 13-14). He subsequently conceded that his calculations only assessed the exposure risks for children under both current and future use assumptions and that he did not assess the exposure risks for adults. (*Id.* at 17-18).

⁶ Although not reflected in his report, during this deposition, Okun calculated that the amount of arsenic that an adult could be exposed to per day that would correspond to a 1 in 10,000 (1×10^{-4}) risk of cancer is 14 micrograms of arsenic per day. (*Id.* at 14). Accordingly, Okun opined, that there would not be an unacceptable increased cancer risk to adults from exposure to the football field. (*Id.*).

greater than 1 in 10,000 (or 1×10^{-4}). (*Id.*) Okun opined that exposure resulting in an excess cancer risk above that level would pose an unacceptable risk to human health. (*Id.*)

Okun explained that his exposure assessment was a baseline risk assessment that did not incorporate any institutional controls. (*Id.* at 23). According to Okun, although the Town had informal institutional controls governing the use of the Park, those controls had not been formalized through a Town ordinance or a deed restriction on the land. (*Id.*). Accordingly, Okun testified, it would be inappropriate to factor those informal controls into his analysis. (*Id.* at 23-24, 26-27).

Okun conceded that he did not conduct any assessment of risks posed by exposure to arsenic concentrations at the Park through inhalation or skin absorption. (*Id.* at 9). In addition, Okun testified that he had no opinion concerning any other contaminants found in the soil at the Park. (*Id.* at 19). Finally, Okun testified that he did not perform any analysis to assess the risk to the environment or wildlife receptors posed by the arsenic concentrations at the Park. (*Id.* at 24-25).

2. Okun's Second Report

Okun's second report, dated February 11, 2014 (the "Second Okun Report"), reflected that his retention had been expanded to include an analysis of the potential health and environmental risks arising from "residual pesticides," in addition to arsenic, in the football field at the Park. (Docket # 69-25 at ¶ 1). The Second Okun Report also indicated that Okun had been asked to review and provide comments on the report authored by the Town's expert, Ollson. (*Id.* at ¶ 4). It also listed the materials that Okun relied upon in arriving at his opinions. (*Id.* at ¶ 13). In the Second Okun Report, Okun identified thirty-three sources, twelve more than those identified in his original report. (*Compare* Docket # 69-25 at ¶ 13 *with* Docket # 65-10 at

¶ 4). Of the twelve new sources, approximately four post-dated Okun's original report and include deposition testimony and reports authored by the Town's experts. (Docket # 69-25 at ¶ 13 (p)-(s)). In addition, the Second Okun Report attached twelve exhibits (Docket ## 69-26 through 69-37), eight more than his original report. (Docket # 65-10 at 14-19).

In section six, Okun described the acceptable methods used to determine whether contamination requires remedial action. (Docket # 69-25 at ¶¶ 24-36). Although this section included an expanded discussion of the relevant concepts, much of the information contained in this section was included in Okun's original report or was discussed during his deposition testimony. (Docket ## 65-10 at ¶¶ X-AA; 65-11 at 4-6, 8-9, 23-24, 26-27).

The next section of the Second Okun Report described his visual observations of the football field at the Park during an April 23, 2013 visit. (Docket # 69-25 at ¶¶ 37-39). This description was included in his original report, although the new report added that he did not observe any signs to indicate that the field's use was restricted. (*Compare id. with* Docket # 65-10 at ¶¶ J-K). Okun testified about this observation during his deposition. (Docket # 65-11 at 23).

In section eight, Okun described the soil samples that were taken from the football field, which form the basis of Okun's analysis. (Docket # 69-25 at ¶¶ 40-42). These are the same samples used in his original report, and Okun again attached two tables reflecting the testing results of the samples, which were attached to his original report. (Docket ## 69-27, 69-28). In addition, Okun attached a new exhibit reflecting the testing results on the soil samples for the presence of lead, arsenic, DDT, DDD and DDE, along with the New York recommended cleanup objectives for these chemicals. (Docket # 69-29). In the following section, Okun opined that levels of arsenic, lead, DDT, DDD and DDE are present in the football field at

concentrations in excess New York recommended cleanup objectives. (Docket # 69-25 at ¶¶ 43-49).

Section ten of the Second Okun Report described engineering and land use restrictions that can be used to reduce the likelihood of adverse health or ecological effects from site contamination. (*Id.* at ¶¶ 50-54). Okun concluded that the Town uses informal practices to limit exposure to Park soil, rather than institutional or engineering controls. (*Id.* at ¶¶ 52-54). Although this information was not contained in Okun's original report, it was discussed during his deposition. (Docket # 65-11 at 23-24, 26-27).

In the next section, Okun outlined the EPA's methodology for assessing site specific human health risks. (Docket # 69-25 at ¶¶ 55-59). In this section, Okun explained that the EPA recommends that site assessments consider both current and future land use and criticized Ollson's analysis for only considering the current use of the Park. (*Id.* at ¶ 58). In addition, Okun explained that his original assessment did not consider any institutional controls in accordance with EPA guidance. (*Id.*). Okun criticized Ollson's assessment because Ollson incorporated informal Town practices into his calculations in order to "significantly reduce the calculated human risk associated with use of the field." (*Id.*).

Okun also explained the manner of characterizing the risk at a particular site. (*Id.* at ¶ 59). According to Okun, the risk characterization is derived by combining concentration and exposure assessment information to calculate the average daily dose, which is then compared to the reference dose and cancer slope factors in order to derive the potential adverse health effect. (*Id.*). Okun agreed with Ollson that for non-cancer risks, a hazard index greater than 1 indicates a potential significant adverse health effect. (*Id.*). With respect to cancer risks, however, Okun noted that the DEC requires chemical cleanups to reduce cancer risks so that they are less than

1×10^{-6} . (*Id.*). Okun criticized Ollson for selecting 1×10^{-4} as the acceptable level of cancer risk. (*Id.*).

In section twelve, Okun compared the arsenic concentrations found in the Park to the various cleanup standards for arsenic promulgated by other states. (*Id.* at ¶¶ 60-62). According to Okun, the concentration levels of arsenic at the Park exceed the cleanup guidelines set by all thirty-three states that have promulgated cleanup guidelines for arsenic. (*Id.*).

The next several sections reflect Okun's opinions. (*Id.* at ¶¶ 70-96). First, Okun opined that the substances of concern include arsenic, lead, DDT, DDE, Endrin, Endrin Aldehyde and Methoxychlor. (*Id.* at ¶¶ 70-71). Okun compared the concentration levels of these substances against the DEC's residential and ecological cleanup objectives and opined that arsenic, lead DDT, DDD and DDE⁷ are present in the Park soil at concentrations greater than the DEC's objectives. (*Id.* at ¶¶ 72-74). According to Okun, the arsenic concentrations exceeded restricted residential cleanup objectives, thus indicating that the arsenic potentially posed a "significant imminent and substantial risk" to human health. (*Id.* at ¶ 73). Okun further opined that under standards promulgated by the state of Massachusetts, the arsenic concentrations in the Park would be termed an imminent hazard and would mandate the Park's immediate closure. (*Id.* at ¶¶ 75-79). Okun further opined that the levels of arsenic, lead, DDT, DDD and DDE at the Park exceeded the DEC's ecological cleanup objective, thus potentially creating a significant "imminent and substantial risk" to the environment. (*Id.* at ¶ 74).

Next, consistent with Ollson and his original report, Okun opined that the exposure point concentration of arsenic in the Park soil is 53.8 mg/kg. (*Id.* at ¶ 80). Further, consistent with both Ollson and his original report, Okun opined that the reference dose for

⁷ Okun's report lists DDT twice in connection with this opinion. (*Id.* at ¶ 74). The Court assumes that the second reference to DDT was a typographical error, and that the report should instead refer to DDE.

arsenic is 3×10^{-4} mg/kg per day and that the cancer slope factor is 1.5 mg/kg per day. (*Id.* at ¶ 84).

Okun's exposure assessment opinion in the Second Report deviated significantly from his previous report. (*Id.* at ¶¶ 86-92). According to Okun, his calculations and assumptions are contained in Exhibit K to his second report. (*Id.* at ¶ 89). In Exhibit K, Okun calculated the cancer risk and non-cancer risks posed by arsenic levels at the Park through either ingestion or dermal exposure by children and by an individual ranging between one to thirty-one years of age. (Docket # 69-36 at 1-2). In making this calculation, Okun altered several of his previous assumptions, including the ingestion rate, receptor weight, method of absorption, and the number of days of exposure.⁸ (*Compare* Docket # 69-36 at 1-2 with Docket # 65-11 at 9, 11, 18).

Using these altered assumptions, Okun calculated that the non-carcinogenic risk to a future residential user of the Park is represented by a hazard index of .81, which includes exposures through both oral ingestion and skin absorption. (Docket ## 69-25 at ¶ 93; 69-36 at 3-5). According to Okun, this risk is less than the acceptable risk. (Docket # 69-25 at ¶ 93). In addition, Okun calculated that the carcinogenic risk to a future residential user of the Park is 2.4×10^{-5} or 24 out of 100,000,000.⁹ (*Id.*). According to Okun, the cancer risk exceeds an acceptable risk level by a factor of 24. (*Id.*). Okun also criticized Ollson's use of a cancer risk of 1×10^{-4} as the threshold for determining whether there is a significant excess cancer risk. (*Id.* at ¶ 94).

Okun's Second Report acknowledged that both RCRA and the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") use the phrase

⁸ The Town contends that Okun also altered his oral absorption rate assumptions by assuming an absorption rate of 50% in his second report, as opposed to the 100% rate that he used in his original report. (Docket # 76-3 at ¶ 24).

⁹ Exhibit K indicates that Okun calculated the cancer risk estimate to be 2.5×10^{-5} ; however, his report indicates that the estimate is 2.4×10^{-5} . (*Compare* Docket # 69-25 at ¶ 93 with Docket # 69-36 at 5).

“imminent and substantial endangerment” to describe a level of harm that may be caused by the release of harmful materials into the environment. (*Id.* at ¶ 97). In addition, Okun noted that the Massachusetts Department of Environmental Protection (“MDEP”) has promulgated criteria to determine when an imminent hazard is present. (*Id.* at ¶ 98). According to Okun, the MDEP has indicated that the presence of arsenic in concentrations greater than 40 mg/kg (or ppm) within the upper twelve inches of soil at a recreation area or park is an imminent hazard. (*Id.* at ¶ 101). Okun noted that he had calculated the EPC for arsenic at the Park to be 53.8 mg/kg, which is thirty-five percent higher than the threshold set by the MDEP. (*Id.* at ¶ 102).

Okun concluded that the arsenic concentrations in the Park football field are more than fifty times greater than the concentrations associated with an acceptable human health cancer risk of 1×10^{-6} and that those concentrations result in an increased cancer risk of 2.4×10^{-5} to individuals who are exposed to the soil. (*Id.* at ¶¶ 104, 108). Further, Okun concluded that the concentrations of arsenic, lead, DDT, DDD and DDE in the football field are significantly greater than the ecological standard cleanup objectives. (*Id.* at ¶ 105). Accordingly, Okun concluded that the concentrations of arsenic, lead, DDT, DDD and DDE “pose significant risks to human health and the environment.” (*Id.* at ¶ 109). In Okun’s opinion, the arsenic in the soil of the football field at the Park poses “an imminent and substantial endangerment to human health.” (*Id.* at ¶ 114).

In the Second Okun Report, Okun noted that even the Town’s expert, Ollson, concluded that the soil at the Park posed an increased cancer risk of 10 in one million to groundskeepers and 4 in one million to athletes, spectators and recreational users. (*Id.* at ¶ 120). According to Okun, these increased risks exceed the acceptable cancer risk level of one in one million. (*Id.*).

3. Okun Affidavit

In addition to the Second Okun Report, Chart also filed an affidavit from Okun dated February 11, 2014, in support of his opposition to the Town's summary judgment motion. (Docket # 69-41). In the affidavit, Okun responds to the Town's criticism of his expert report. (*Id.* at ¶ 3). According to Okun, both he and Ollson use the same methodology to assess the risk posed by the level of arsenic concentrations at the Park. (*Id.*). Okun contends that the only significant disagreements between the two experts are the appropriate assumptions to use to evaluate the risk and their opinions concerning the acceptable level of cancer risk. (*Id.*).

According to Okun, both he and Ollson identified the hazards of concern by comparing the contaminant concentrations in the soil samples to the state cleanup objectives for restricted residential uses. (*Id.* at ¶ 4). In addition, according to Okun, he and Ollson agree that the EPC for arsenic in the soil is 53 mg/kg, that the dose reference for non-cancer risk is 3×10^{-4} mg/kg per day and that the appropriate cancer risk slope factor is 1.5 mg/kg per day. (*Id.* at ¶¶ 4-7).

With respect to the exposure assumptions, Okun's affidavit explains that both experts agree that the EPA provides the correct criteria to assess whether contamination at a particular site poses an unreasonable risk to human health. (*Id.* at ¶ 9). According to Okun, he followed the EPA criteria by considering the potential future use of the site and not incorporating institutional controls; by contrast, Ollson did not adhere to the EPA's criteria because he incorporated informal Town practices into his analysis and did not consider the potential future uses of the Park. (*Id.* at ¶¶ 10-20, 22). In addition, Okun contends that he properly assumed that an individual would be exposed 350 days per year, in accordance with EPA and DEC protocols. (*Id.* at ¶ 21).

With respect to the acceptable level of excess cancer risk, Okun contends that both he and Ollson agree that the EPA considers the target risk range to be within 1×10^{-4} and 1×10^{-6} . (*Id.* at ¶ 23). In addition, according to Okun, both experts agree that when the EPA takes action at a particular site, it prefers site remediation towards the more protective – 1×10^{-6} – end of the range. (*Id.* at ¶¶ 24-25).

According to Okun, even if Ollson were correct that the Town's informal policies should be incorporated into the analysis, Ollson's calculations result in a cancer risk greater than the 1×10^{-6} level. (*Id.* at ¶ 26). Ollson maintains those risks are within an acceptable range and do not pose an imminent and substantial threat to human health. (*Id.* at ¶¶ 26-27). According to Okun however, those cancer risks are unacceptable and demonstrate that the soil at the Park poses an imminent and substantial harm to human health. (*Id.*).

Okun's affidavit also discusses his analysis of the threat to the environment caused by the concentrations of arsenic, lead, DDT, DDD and DDE in the soil at the Park. (*Id.* at ¶¶ 31-35). Finally, Okun's affidavit addresses the adequacy of the grass cover on the football field as a remedy for soil contamination. (*Id.* at ¶¶ 36-40).

4. Day Report

Day is an environmental engineer with approximately thirty-seven years of experience investigating and remediating contaminated sites in New York. (Docket # 65-4). He was retained by Chart to provide an analysis and opinion regarding the presence of pesticide-contamination in the soil at the Park. (*Id.* at 1). In his report, Day provided a history of the alleged contamination, including the Town's 2003 purchase of the contaminated soil from Crowley, a developer who was redeveloping land formerly used as an apple orchard. (*Id.* at 3-4).

In connection with his analysis, Day reviewed the results of soil sampling conducted by Chart and by Chatfield Engineers (“Chatfield”). (*Id.* at 4). According to Day, those samples establish that the soil on the football field contains on average 47.9 ppm of arsenic. (*Id.* at 6). Day opined that these levels were in excess of standard cleanup objectives of 16 ppm used by state agencies for restricted residential properties and in excess of the 5 to 7.5 ppm background levels of arsenic otherwise contained in the soil at the Park. (*Id.* at 6-7).

Day visited the Park during the summers of 2011 and 2012 and observed that the football field was used for soccer games. (*Id.* at 8). According to Day, the field was dry and many areas of the field had exposed soil. (*Id.*). Day further indicated that despite some representation that the football field was used for only approximately eight football games per year, Town records reveal that the football field was used on 33 days in 2008, 33 in 2009 and 24 in 2010. (*Id.* at 7). Day also reviewed several regulations and tables prepared by New York agencies, including the DEC and the Department of Health. (*Id.* at 5-8).

Day opined that the soil obtained from Crowley was a solid waste, the appropriate soil cleanup objective for arsenic in the football field is 16 ppm, and the Town should be required to remediate the area. (*Id.* at 8). Day further opined that the current use of the football field at the Park is significantly greater than that indicated by Town representatives. (*Id.* at 9). In addition, Day opined that the Town should be required to conduct additional sampling in other areas of the Park where the contaminated soil was placed. (*Id.*).

5. Day Affidavit

In support of his opposition to the Town’s summary judgment motion, Chart submitted an affidavit from Day. (Docket # 69-40). In the affidavit, Day expands upon the observations of the Park that he made during his visits between 2011 and 2013. (*Id.* at ¶ 2). Day

also clarifies an answer that he gave during his deposition. (*Id.* at ¶¶ 3-4). According to Day, during his deposition, he was asked if he had considered the definition for solid waste under New York regulations and under RCRA. (*Id.*). Day responded that he had not considered the RCRA definition of solid waste. (*Id.*). According to Day, although he had not specifically considered the RCRA definition, he had considered the fact that the New York regulations were authorized by RCRA. (*Id.*). In his opinion, the topsoil sold by Crowley is a solid waste under both the New York regulations and RCRA. (*Id.*).

Day's affidavit contains his criticisms of sampling performed by Chatfield. (*Id.* at ¶ 5). According to Day, the samples were not collected near the surface and were taken from a composited area, which made it impossible to determine whether there were distinct areas of contamination. (*Id.*). Day's affidavit also addresses the inspection and monitoring of the football field (*id.* at ¶¶ 6-7), New York State's soil cleanup objectives (*id.* at ¶¶ 8-11), and federal and state determinations regarding the acceptable level of cancer and non-cancer risks posed by contaminated soils (*id.* at ¶¶ 12-14).

B. The Town's Motion to Preclude Okun

1. The Parties' Positions

The Town argues that Okun's report should be precluded because it is unreliable and lacks an adequate foundation. (Docket # 66 at 16-20). According to the Town, Okun's report fails to set forth his methodology or calculations and his opinions are conclusory. (*Id.* at 18). Specifically, the Town contends that despite Okun's opinion in his report that the Park's topsoil poses an imminent and substantial endangerment to the environment, he conceded during his deposition that he did not analyze the potential harm to the environment. (*Id.* at 18-19).

Thus, the Town maintains, Okun had no basis upon which to reach his conclusion about environmental risk. (*Id.*).

With respect to Okun's opinions regarding the harm to human health posed by the topsoil, the Town contends that Okun's report fails to identify the methods, techniques or theories that he used to reach his conclusion. (*Id.* at 19). According to the Town, Okun's report does not identify his exposure parameters, field usage or time activity patterns – all of which are requirements for a standard risk assessment. (*Id.*). Further, the Town contends that Okun failed to provide the calculations or spreadsheets that he used to reach his conclusions. (*Id.*).

Most significantly, the Town challenges Okun's failure to consider the actual use of the Park's football field. (*Id.* at 19-20). According to the Town, Okun described his analysis as a "baseline analysis" that calculated the potential exposure under the "most conservative scenario." (*Id.*). According to the Town, Okun conceded in his report that in order to determine the likely dose, one would have to consider the number of days of exposure, which would depend upon the use of the field. (*Id.*). Yet, the Town maintains, Okun failed to consider the actual use of the field. (*Id.*). Instead, Okun's analysis calculated the anticipated exposure assuming that the field was used as a residential property and that potential receptors would be exposed 350 days per year. (*Id.* at 23).

Further, the Town maintains that Okun failed to conduct any analysis regarding potential harm to adults from exposure to the topsoil, but instead only considered the potential effects on children. (*Id.* at 20). Finally, the Town contends that Okun's report concluded that the fields presents an unacceptable non-carcinogenic risk to children; however, Okun testified during his deposition that the non-carcinogenic risk to children was within an acceptable range. (*Id.*).

In response, Chart contends that Okun's opinions are both relevant and reliable. (Docket # 69-45 at 11-12). According to Chart, Okun's testimony is relevant because it identifies the potential source of harm to human health and quantifies the risks posed to human health. (*Id.* at 12). Chart further maintains that after conducting an evaluation of the human health risk, Okun concluded that the soil at the Park exceeds the safe levels for both non-carcinogenic and carcinogenic risks. (*Id.* at 13-14).

Chart also maintains that Okun's opinions are reliable. (*Id.* at 14-18). According to Chart, both Okun and Ollson use the same methodology to assess human health risk, including use of the same soil cleanup standards, exposure point concentration, reference dose and cancer risk slope factor.¹⁰ (*Id.* at 14-15). Further, Chart contends that Okun's analysis is based upon reasonable assumptions. (*Id.* at 15-16). According to Chart, Okun's analysis properly assumed that an individual would be exposed 350 days per year and properly ignored the Town's informal practices regarding use of the football field. (*Id.* at 15). Chart maintains that the fact that Okun had difficulty reproducing a calculation during his deposition and his failure to attach his calculations to his report are not grounds to preclude his testimony. (*Id.* at 17-18). Finally, Chart contends that Okun's opinion rests upon a proper foundation. (*Id.* at 18-19).

In reply, the Town continues to maintain that Okun should be precluded from testifying. (Docket # 77 at 10-15). According to the Town, Okun's testimony and his various reports reveal significant and unexplained inconsistencies that underscore the unreliability of Okun's analysis. (*Id.*). The Town maintains that the Second Okun Report is based upon the same "unreasonable and implausible" assumptions regarding the current and potential future use

¹⁰ The Town argues that certain portions of Chart's opposing papers should be stricken because they are supported by evidence from Okun and Day, which are the subject the Town's motion to strike. (Docket ## 70-2, 70-3). The Court addresses the Town's motion to strike below and has not relied upon any of the stricken evidence in its decision whether to preclude Okun's original report and testimony.

of the Park and is as defective as his original report. (*Id.* at 14). Finally, the Town continues to maintain that Okun conceded during his deposition that he did not conduct an analysis of potential risks to the environment and thus should be precluded from opining on environmental risk. (*Id.* at 15).

2. Analysis

Rule 702 of the Federal Rules of Evidence requires that a proposed expert witness be qualified on the basis of “scientific, technical, or other specialized knowledge [that] will help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702. Accordingly, an expert may provide testimony if (1) “the testimony is based upon sufficient facts or data”; (2) “the testimony is the product of reliable principles and methods”; and, (3) “the expert has reliably applied the principles and methods to the facts of the case.” *Id.* The trial court must fulfill a “gatekeeping” duty under Rule 702 to ensure that any expert testimony to be admitted is “not only relevant, but reliable.” *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993); *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999). Thus, the trial court’s inquiries should focus on three issues: “(1) whether the witness is qualified to be an expert; (2) whether the opinion is based upon reliable data and methodology; and (3) whether the expert’s testimony on a particular issue will assist the trier of fact.” *Arista Records LLC v. Lime Grp. LLC*, 2011 WL 1674796, *1 (S.D.N.Y. 2011) (citing *Nimely v. City of New York*, 414 F.3d 381, 396-97 (2d Cir. 2005)).

Under *Daubert* and *Kumho Tire*, a court must “first determine whether the proffered testimony is relevant.” *Am. Ref-Fuel Co. of Niagara, LP v. Gensimore Trucking, Inc.*, 2008 WL 1995120, *3 (W.D.N.Y. 2008). Further, the testimony must “help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702; *see also Daubert v.*

Merrell Dow Pharm., Inc., 509 U.S. at 591; *Campbell v. Metro. Prop. & Cas. Ins. Co.*, 239 F.3d 179, 184 (2d Cir. 2001). The question is one of “fit,” meaning that the evidence must be “sufficiently tied to the facts of the case.” *Daubert*, 509 U.S. at 591 (quoting *United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985)). Where an expert opinion is based upon assumptions that are not present in the case, the opinion “cannot be said to ‘assist the trier of fact’ as Rule 702 requires.” *Elcock v. Kmart Corp.*, 233 F.3d 734, 756 n.13 (3d Cir. 2000). Thus, such an opinion “misleads the fact-finder and arguably does not comply with the ‘fit’ requirement of that Rule.” *Id.*

After determining that the proffered testimony is relevant, the court must determine whether the proffered testimony “has a sufficiently ‘reliable foundation’ to permit it to be considered.” *Am. Ref-Fuel Co. of Niagara, LP v. Gensimore Trucking, Inc.*, 2008 WL 1995120 at *3 (quoting *Campbell v. Metro. Prop. & Cas. Ins. Co.*, 239 F.3d at 184-85). The court has “considerable leeway” in deciding how best to make that determination. *Kumho Tire Co. v. Carmichael*, 526 U.S. at 152. In determining reliability, the trial court must “focus on the principles and methodology employed by the expert, without regard to the conclusions the expert has reached or the [court’s] belief as to the correctness of those conclusions.” *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002). To assist courts in making this determination, the Supreme Court has identified the following factors to consider when determining the reliability of the methodology used by a proffered expert: “(1) whether the theory or technique can be tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) whether the technique has a known or potential rate of error; and (4) whether the theory or technique has been met with widespread acceptance.” *Emig v. Electrolux Home Prods. Inc.*, 2008 WL 4200988, *6 (S.D.N.Y. 2008) (citing *Daubert*, 509 U.S.

at 593-94). The Rule 702 inquiry is “a flexible one,” *Daubert*, 509 U.S. at 594, and while “a trial court *may* consider one or more of the more specific factors that *Daubert* mentioned[,] . . . [the] list of specific factors neither necessarily nor exclusively applies to all experts or in every case,” *Kumho Tire Co.*, 526 U.S. at 141. “The primary objective is ‘to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.’” *Cerbelli v. City of New York*, 2006 WL 2792755, *2 (E.D.N.Y. 2006) (quoting *Kumho Tire Co.*, 526 U.S. at 152).

Chart offers Okun to provide his opinion on the risks to both human health and the environment resulting from the presence of arsenic at the Park. The Town seeks preclusion of Okun’s opinions on both issues.

a. Environmental Risk

The Town contends that Okun should be precluded from offering any opinion regarding the risks that the arsenic levels in the soil at the Park pose to the environment because Okun’s risk assessment only quantified the risk posed to human health. (Docket # 66 at 18-19). Having reviewed Okun’s original report and his deposition testimony, I agree.

In his original report, Okun opines that the arsenic-contaminated soil in the football field at the Park poses a present or potential hazard and an imminent and substantial threat to the environment. (Docket # 65-10 at ¶¶ SS & UU). To support these opinions, Okun compared the arsenic levels in the topsoil against the regulatory cleanup objective for the protection of ecological resources promulgated by the DEC. (*Id.* at ¶ PP). The report does not reflect that Okun performed a risk assessment to analyze the risk that the arsenic concentrations posed to the environment. Indeed, Okun testified during his deposition that he did not conduct

any analysis to evaluate either the present or the potential hazard to the environment. (Docket # 65-11 at 24-25). According to Okun, his calculations only assessed the risk posed to human health. (*Id.*). Okun testified that his calculations “could be expanded to address ecological or environmental receptors,” but he had not undertaken that analysis. (*Id.* at 25). Okun also testified that he did not evaluate the potential for runoff, although his “sense of directions” was that there were wetlands in the direction “moving away from the road through the football field.” (*Id.* at 24).

Having conceded that he did not assess the risk posed to the environment, Okun’s opinion that the arsenic contamination poses a threat to the environment is not supported by reliable scientific methodology, and his opinion should be precluded. *See Lewis v. FMC Corp.*, 786 F. Supp. 2d 690, 702-03 (W.D.N.Y. 2011) (“[b]ecause [the expert] concedes both that further investigation is required to identify the source(s) and extent of contamination, and that he did not undertake the risk-based calculation essential to an assessment of risks and remedies, no reliable scientific methodology or basis exists for his opinion that releases from [the property] pose an imminent and substantial endangerment to . . . the environment”); *see also Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199, 212 (2d Cir. 2009) (expert report that compared sample lead concentrations against state threshold standards for residential sites and stated that a risk assessment would be required to evaluate the degree of risk posed to human health and the environment was “plainly insufficient to raise a material issue” of fact on summary judgment; “state environmental standards do not define a party’s federal liability under RCRA”) (internal quotation omitted).

b. Human Health Risk

The Town challenges Okun's human health risk assessment on several grounds. According to the Town, Okun failed to support his assessment with citations to scientific references, to identify his exposure assumptions, to support his analysis with references to any generally-accepted methodology and to attach his underlying calculations. (Docket # 66 at 19). In addition, the Town contends that Okun's assessment rests upon two unreasonable assumptions that fail to account for the football field's actual use. (*Id.* at 20). According to the Town, Okun unreasonably assumed that the field could be converted into a residential property and that potential receptors could be exposed to the soil 350 days per year. (*Id.*). I agree with the Town that Okun's assumption that the field could be converted into residential property is speculative and fails to account for the actual facts of this case. I disagree, however that Okun's assumption concerning the frequency of potential exposure is so speculative as to warrant preclusion.

In his report, Okun calculated that a child receptor who used the football field under its current use would be expected to ingest 4.885 micrograms of arsenic per day and that a child's ingestion of approximately 4 micrograms of arsenic per day results in an excess cancer risk of 1×10^{-4} . Okun further concluded that a dose to a child in excess of 6 micrograms per day would pose a significant non-cancer risk. Thus, Okun concluded that the arsenic concentrations in the soil exceeded safe levels for children using the field under its current use for carcinogenic risks but not for non-carcinogenic risks. Okun also calculated that a child receptor who used the property under its potential future use as residential property would be expected to ingest 10.77 micrograms of arsenic per day. Thus, Okun concluded that the arsenic concentrations in the soil exceeded safe levels for future child residential users of the field for both carcinogenic and non-carcinogenic risks.

During his deposition, Okun testified that he conducted a “baseline risk assessment” that assumed that the field could be used as a residential property and that potential receptors would be exposed 350 days each year. (Docket # 65-11 at 11). Okun testified that EPA guidance provides that it is appropriate to assume that a receptor will be exposed approximately 350 days per year when conducting risk assessment for residential properties. (*Id.*). According to Okun, he assumed the “most conservative” use for the field because he concluded that incorporation of site use limitations into the analysis was improper because such limitations are not “locked in with a formal institutional control.” (*Id.* at 11, 27). According to Okun, he was aware that the Town has represented that it limits the use of the field through Town policies regarding use, but determined that it would be inappropriate to incorporate those limitations into a risk assessment unless those use limitations were formalized. (*Id.* at 24).

According to the Town, the football field is primarily used as a “game day” field for youth football games, annual soccer tournaments, lacrosse tournaments and a fireworks display. (Docket # 65-1 at ¶ 32). The Town contends that leagues and coaches are instructed to use the field only for games and tournaments and not for regular practices. (*Id.* at ¶ 35). The Town maintains that the Park is posted as closed during the winter months, and it anticipates that the current use of the field will remain the same for the foreseeable future. (*Id.* at ¶¶ 34, 38-39). According to the Town, in order to change the use of the Park, the Town would be required to obtain parkland alienation approval from the New York State Legislature and Governor and would likely need the approval of the National Park Service. (Docket # 66 at 13-14) (citing *Village of Croton-on-Hudson v. Westchester Cnty.*, 38 A.D.2d 979, 979 (2d Dep’t), *aff’d*, 30 N.Y.2d 959 (1972); *Kenny v. Bd. of Trustees of Vill. of Garden City*, 289 A.D.2d 534, 534 (2d Dep’t 2001); N.Y. PARKS, REC. & HIST. PRESERV. LAW §§ 15.09, 17.09; N.Y. ENVTL. CONSERV.

LAW §§ 52-0907, 54-0909(1), 56-0309(12)). The Town further asserts that an environmental review would be a prerequisite to approval. (*Id.*).

Chart disputes the Town's assertions on the grounds that the Town does not have written policies or institutional controls that require that the field be used in the manner of its current use. (Docket # 69 at ¶¶ 32-39). In addition, Chart contends that there are no formal land use restrictions, such as an environmental easement, that prohibit other uses of the property. (*Id.* at ¶ 32 (a)–(c)). Finally, Chart maintains that no fence or other barrier exists to restrict physical access to the Park, and children have been observed using the football field informally. (*Id.* at ¶ 32 (d)–(e)).

Generally, arguments about the assumptions and data underlying an expert's testimony go to the weight, rather than the admissibility, of that testimony. *Arista Records LLC v. Lime Grp. LLC*, 2011 WL 1674796 at *7; *R.F.M.A.S., Inc. v. So*, 748 F. Supp. 2d 244, 269 (S.D.N.Y. 2010). Yet, consistent with the Court's role as a gatekeeper, the Court should exclude expert evidence if it is "speculative or conjectural or if it is based on assumptions that are so unrealistic and contradictory as to suggest bad faith or to be in essence an apples and oranges comparison." *Boucher v. U.S. Suzuki Motor Corp.*, 73 F.3d 18, 21 (2d Cir. 1996) (internal citations and quotations omitted); *Degleman Indus. Ltd v. Pro-Tech Welding & Fabrication, Inc.*, 2011 WL 6754051, *2 (W.D.N.Y.) ("[w]hen an expert witness relies upon invalid assumptions or demonstrates a lack of inquiry into the relevant facts, the expert witness' testimony will be precluded") (citing *Oglesby v. Gen. Motors Corp.*, 190 F.3d 244, 250 (4th Cir. 1999)), *report and recommendation adopted*, 2011 WL 6752565 (W.D.N.Y. 2011). Thus, although experts are given wide latitude to make assumptions, "that wide latitude is finite; the expert's assumptions must still be 'accompanied by a sufficient factual foundation' and cannot ignore the 'real

world.”” *Edison Wetlands Ass’n, Inc. v. Akzo Nobel Chems., Inc.*, 2009 WL 5206280, *6 (D.N.J. 2009) (quoting *Elcock v. Kmart Corp.*, 233 F.3d at 755, 756 n.12).

Okun’s arsenic dose range calculation of 10.77 micrograms of arsenic per day rests upon the assumption that the Park may be used as residential property at some future date. Using this dose range calculation, Okun concludes that there is both an excess cancer and non-cancer risk to future child residential users of the field.

Okun’s future residential use assumption, however, is not based upon any facts indicating or suggesting that the Park is likely to be converted to such uses or that the Town is considering conversion to alternative uses. Indeed, the evidence suggests that in order to convert the Park into residential property, the Town would have to seek and obtain state legislative approval, and the Park would have to undergo an environmental review before such approval could be obtained. Okun theorizes that because a future residential use is not strictly prohibited, he properly incorporated a future residential use into his assessment. Given the legal obstacles to conversion of the Park to residential use, I find that Okun’s residential assumption is too speculative to be considered reliable. *See Edison v. Wetlands Ass’n, Inc. v. Akzo Nobel Chems., Inc.*, 2009 WL 5206280 at *6; *see also Supply & Bldg. Co. v. Estee Lauder Intern’l, Inc.*, 2001 WL 1602976, * 5 (S.D.N.Y. 2001) (precluding expert report where expert relied upon unrealistic assurances instead of available records; “as an insufficient factual basis exists for the assumptions upon which [the report] rests, the Court finds [p]laintiff’s report and [the expert’s] testimony are unreliable and, therefore, inadmissible”). Accordingly, I conclude that Okun should be precluded from offering his opinion on the risks the arsenic concentrations in the soil pose to children if the property is used for residential purposes. *See Edison*, 2009 WL 5206280 at *6 (precluding expert where his “assumptions lack[ed] . . . factual foundation because he

ignored the realities of the [s]ite in calculating his exposure assumptions[;] [a]lthough [the expert] used a standard method in his risk assessment, the conclusions of this assessment are rendered meaningless because his factual assumptions, which drove the calculations that lead to those conclusions, are not tied to the facts in a reasonable way”).

Okun’s remaining arsenic dose range calculation of 4.885 micrograms of arsenic per day calculates the expected daily ingestion by current child users of the football field. Using that calculation, Okun opines that there would be an excess cancer risk to current child users of the field, but not an excess non-cancer risk to those children. This opinion is not based upon the unreasonable assumption that the Park will be converted into residential property and thus does not suffer from the deficiencies identified above. In reaching this conclusion, however, Okun testified that he did not incorporate any of the Town’s policies limiting the use of the football field. Thus, the calculation assumes a 350 day exposure. (Docket ## 65-1 at ¶ 123; 69 at ¶ 123).

The Town challenges Okun’s failure to consider the Town’s policies regarding field use, maintaining that a 350-day use assumption is so unreasonable as to warrant preclusion. Okun maintains that his assessment accords with EPA guidelines that counsel against incorporation of informal use limitations. Chart has presented evidence that no fences or other barriers exist to prevent access to the Park and that children have been observed using the Park in contravention of the Town’s field use policies. On these alleged facts, I cannot conclude that Okun’s 350-day exposure assumption is so speculative as to warrant preclusion. *See Arista Records LLC*, 2011 WL 1674796 at *7 (“[a]rguments about the assumptions and data underlying an expert’s testimony go to the weight, rather than the admissibility, of that testimony”); *R.F.M.A.S., Inc. v. So*, 748 F. Supp. 2d at 269 (“[u]nless the information or assumptions that [a party’s] experts relied on were so unrealistic and contradictory as to suggest bad faith,

inaccuracies in the underlying assumptions or facts do not generally render an expert's testimony inadmissible") (internal quotations omitted). The Town's criticism of Okun's 350-day assumption, of course, may be explored during cross-examination at trial.

I reject the Town's remaining challenges to Okun's testimony, including that he failed to provide citations to primary literature scientific references, failed to attach calculations and was unable to recreate a calculation during his deposition – all of which are proper subjects for cross-examination and go to the weight, not admissibility of Okun's testimony. *See Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d at 267 (“[w]here an expert otherwise reliably utilizes scientific methods to reach a conclusion, lack of textual support may go to the weight, not the admissibility of the expert's testimony”) (internal quotations omitted); *Olindo Enters., Inc. v. City of Rochester*, 2008 WL 686259, *4 (W.D.N.Y. 2008) (“where an expert's underlying methodology is reliable, defects in the conclusion drawn should be explored on cross-examination and go to the weight of the evidence, not its admissibility”). Accordingly, Okun will be permitted to offer his opinion that the arsenic concentrations in the soil of the field pose an unacceptable cancer risk to children who use the field. Okun is precluded from offering an environmental risk opinion or a human health risk opinion concerning future residential users of the property.

C. The Town's Motion to Strike the Second Okun Report and the Okun and Day Affidavits

1. The Parties' Positions

I turn next to the Town's motion to strike the Second Okun Report and the Okun and Day Affidavits. According to the Town, Okun's second report attempts to rehabilitate the deficiencies identified by the Town in its motion to preclude and provide additional information in rebuttal to Ollson's report. (Docket # 70-4 at 6-9). The Town maintains that the Second Okun

Report is not a supplemental report under Rule 26(e) of the Federal Rules of Civil Procedure because it is not based upon any information that was unknown or unavailable to Okun at that time he issued his original report. (*Id.*). The Town contends that the only additional documents relied upon by Okun in his second report include the Town's expert reports and deposition testimony and agency documents dated between 1991 and 2010. (*Id.*). To the extent the Second Okun Report contains rebuttal information, the Town argues, it is untimely because it was not served within the deadline set forth in Rule 26(a)(2)(D)(ii) of the Federal Rules of Civil Procedure. (*Id.*).

In addition, the Town contends that the Day and Okun Affidavits contain new opinions not contained in their original reports and rebuttal information. (Docket # 70-1 at ¶ 30). The Town maintains that the new opinions are untimely because they were not included in the experts' original reports and the rebuttal opinions are untimely because they were not disclosed within the thirty-day deadline provided by Rule 26. (*Id.*).

With respect to the Okun Affidavit, the Town maintains that it contains a new ecological risk assessment that Okun previously conceded he had not conducted. (*Id.* at ¶ 33 (b)). In addition, the Okun affidavit compares and contrasts the methodologies he used with those used by Ollson, which the Town maintains is improper rebuttal. (*Id.* at ¶ 33 (a)). Finally, the Town contends that the Okun affidavit improperly contains an expanded discussion of the adequacy of sod as an exposure barrier. (*Id.* at ¶ 33 (c)).

With respect to the Day Affidavit, the Town argues that it contains a new opinion regarding the Town's management of the football field at the Park and a new opinion regarding the soil cleanup objectives promulgated by New York and the EPA. (*Id.* at ¶ 31 (d)-(e)). In addition, the Town maintains that the Day Affidavit provides an assessment of sampling

conducted by Chatfield. (*Id.* at ¶ 31 (c)). Finally, the Town contends that the Day Affidavit describes observations of the football field that were not included in his original report and clarifies his response to a line of questioning during his deposition. (*Id.* at ¶ 31 (a)-(b)).

The Town urges that the Second Okun Report and the Okun and Day Affidavits should be stricken because Chart has failed to justify their late disclosure and the Town relied upon their previous disclosures in disclosing its expert reports, conducting expert discovery and framing its pending motions for preclusion and for summary judgment. (*Id.* at ¶¶ 37-47; Docket # 70-4 at 10-15). The Town also requests that it be awarded attorneys' fees and costs in connection with the motion. (*Id.*).

Chart opposes the motion on the grounds that the Second Okun Report is neither a supplemental report nor a rebuttal report. (Docket # 75 at 2-3). According to Chart, the Second Okun Report and the Okun and Day Affidavits merely elaborate and explain Okun's and Day's prior opinions and thus were properly submitted in support of Chart's opposition to the Town's summary judgment motion. (*Id.* at 2).

With respect to the Second Okun Report, Chart maintains that Okun reached the same conclusions with respect to the environmental and human health risks posed by the arsenic concentrations as he did in his first report, although he concedes that Okun expressed his opinions "in another way." (*Id.* at 3-7).

With respect to the Okun Affidavit, Chart contends that the affidavit merely elaborates or explains Okun's opinions. (*Id.* at 8-14). For example, according to Chart, the ecological risk assessment contained in Okun Affidavit merely elaborated and explained Okun's opinion in his original report that the arsenic concentrations in the soil exceeded the ecological

soil cleanup objectives for arsenic.¹¹ (*Id.* at 13-14). Similarly, Chart maintains that Okun's comparison of his methodologies with those employed by Ollson does not contain any new information or rebuttal. (*Id.* at 9). Finally, Chart contends the Okun's discussion of the effectiveness of the sod barrier is consistent with his original report's conclusion that "the presence of a partial grass cover on the football field does not alter the health and environmental risk posed by the arsenic in the soil." (*Id.* at 11).

Chart similarly contends that Day's affidavit merely elaborates and explains his expert report with the exception of his discussion of the Town's management practices, which Chart apparently concedes was not part of his original report or deposition testimony. (Docket # 75 at 14-16).

Chart urges this Court to exercise its discretion and decline to strike the challenged report and affidavits even if it determines that they contain opinions that should have been disclosed earlier. (*Id.* at 17). Chart explains that he believed that his expert reports were complete and that any additional information in them was disclosed during discovery. (*Id.* at 19). Further, Chart maintains that the information and opinions contained in the challenged report and affidavits are critical to his opposition to the Town's summary judgment motion. (*Id.*). Chart contends the Town will suffer no prejudice because the information in the challenged documents was either disclosed during discovery or discussed during the experts' depositions. (*Id.*). Further, Chart notes that a trial date has not been set, and no evidence exists that he has acted in bad faith. (*Id.* at 20).

¹¹ Chart improperly argues that Okun's opinion that the field concentrations of lead, DDT, DDD and DDE exceed the ecological soil cleanup objectives merely "elaborated and explained" Okun's prior submission. (*Id.* at 14). As he confirmed during his deposition, Okun's original report did not assess the field concentrations of lead, DDT, DDD or DDE. (Docket # 65-11 at 19).

In reply, the Town continues to maintain that preclusion is warranted because Chart has not provided an adequate explanation for the late disclosure, the information contained in the documents is not critical to the prosecution of Chart's claims and the Town will be prejudiced if the documents are not stricken. (*Id.* at 5-10).

2. Analysis

Rule 26(a)(2)(B)(i) of the Federal Rules of Civil Procedure provides that a written expert report must contain "a complete statement of all opinions the witness will express and the basis and reasons for them." Fed. R. Civ. P. 26(a)(2)(B)(i). "It should be assumed that at the time an expert issues his report, that report reflects his full knowledge and complete opinions on the issues for which his opinion has been sought." *Innis Arden Golf Club v. Pitney Bowes, Inc.*, 2009 WL 5873112, *3 (D. Conn. 2009) (quotation omitted). Thus, "experts are not free to continually bolster, strengthen, or improve their reports by endlessly researching the issues they already opined upon, or to continually supplement their opinions." *Cedar Petrochems., Inc. v. Dongbu Hannong Chem. Co.*, 769 F. Supp. 2d 269, 278 (S.D.N.Y. 2011) (quotations omitted). Accordingly, an expert should be precluded from testifying about previously undisclosed opinions, particularly where they "expound a wholly new and complex approach." *Point Prods. A.G. v. Sony Music Entm't, Inc.*, 2004 WL 345551, *9 (S.D.N.Y. 2004). In contrast, expert testimony can provide additional information or elaborate on previously expressed opinions, so long as the testimony is within the scope of the expert's report. *See Harkabi v. SanDisk Corp.*, 2012 WL 2574717, *3-4 (S.D.N.Y. 2012). Parties are required to make their expert disclosures "at the times and in the sequence that the court orders." Fed. R. Civ. P. 26(a)(2)(D). In addition, parties have thirty days after another party's expert disclosure to produce any expert evidence

“intended solely to contradict or rebut evidence on the same subject matter identified by another party.” Fed. R. Civ. P. 26(a)(2)(D)(ii).

Rule 37(c)(1) provides that if a party fails to disclose information “as required by Rule 26(a) or (e), the party is not allowed to use that information . . . unless the failure was substantially justified or is harmless.” Fed. R. Civ. P. 37(c)(1). The party seeking Rule 37 sanctions bears the burden of showing that the opposing party failed to timely disclose information. *See Lodge v. United Homes, LLC*, 787 F. Supp. 2d 247, 258 (E.D.N.Y. 2011).

“Rule 37(c)(1)’s preclusionary sanction is automatic absent a determination of either substantial justification or harmlessness.” *Innis v. Arden Golf Club v. Pitney Bowes, Inc.*, 2009 WL 5873112 at *2. The purpose of this rule is “to prevent the practice of ‘sandbagging’ an adversary with new evidence.” *See Ritchie Risk-Linked Strategies Trading (Ireland), Ltd. v. Coventry First LLC*, 280 F.R.D. 147, 156 (S.D.N.Y. 2012) (“*Ritchie Risk*”) (quoting *Ebewo v. Martinez*, 309 F. Supp. 2d 600, 607 (S.D.N.Y. 2004)).

As an alternative to preclusion, the rule also affords the court discretion to impose lesser sanctions, such as monetary sanctions or an adverse jury instruction, “in addition to or instead of this sanction.” Fed. R. Civ. P. 37(c)(1); *Ritchie Risk*, 280 F.R.D. at 156 (“imposition of the preclusion sanction remains within the trial court’s discretion”). Indeed, the Second Circuit has counseled district courts to consider lesser sanctions prior to precluding evidence as a sanction for discovery violations. *See Outley v. City of New York*, 837 F.2d 587, 591 (2d Cir. 1988) (“[b]efore the extreme sanction of preclusion may be used by the district court, a judge should inquire more fully into the actual difficulties the violation causes, and must consider less drastic responses”); *Hunt v. CNH Am. LLC*, 857 F. Supp. 2d 320, 340 (W.D.N.Y. 2012) (noting

that courts should consider lesser sanctions before precluding a new expert opinion disclosed after discovery deadline in violation of Rule 26(a)(2)(B)), *aff'd*, 511 F. App'x 43 (2d Cir. 2013).

a. Chart's Violation of Rule 26(a)

I must first determine whether the Second Okun Report and the Okun and Day Affidavits contain previously undisclosed new opinions or rebuttal opinions that are therefore untimely under Rule 26(a)(2)(D) or whether the information in these documents merely elaborates the opinions contained in the experts' original reports. In making this determination, the Court will also consider whether or not the information provided by Okun in his second report or his affidavit corrects the deficiencies that justify preclusion of portions of Okun's human health risk assessments and his environmental risk assessment in his original report.

(i) The Second Okun Report

As discussed in detail above, the Second Okun Report contains substantial information, including several opinions with supporting analyses or discussions. The Court categorizes the relevant portions as follows:

- (1) Okun provides an opinion that the arsenic concentration in the soil poses a threat to the environment. (Docket #69-25 at ¶¶ 105, 109). This opinion is supported by Okun's comparison of the arsenic concentration levels in the soil at the Park to ecological soil cleanup objectives. (*Id.* at ¶¶ 40-42, 43-48).
- (2) Okun provides assessments and opinions concerning the risk to the environment posed by lead, DDD, DDT, DDE. (*Id.* at ¶¶ 20, 40, 42, 43, 47, 48, 49, 56, 70, 74, 105, 109).
- (3) Okun provides an opinion that the arsenic concentration in the soil poses a threat to human health. (*Id.* at ¶¶ 109-12, 114, 118, 119). This opinion is supported by general discussions of contaminant identification and site specific information, including contaminant concentrations (*id.* at ¶¶ 24-42, 70-71, 116), regulatory considerations including soil cleanup objectives (*id.* at ¶¶ 43-46, 60-68, 72-73,

75-79, 95-96, 104, 106-07), permissible limiting assumptions (*id.* at ¶¶ 50-54, 113, 115), appropriate methodology (*id.* at ¶¶ 55-59), a hazard identification opinion (*id.* at ¶ 80), a dose-response assessment (*id.* at ¶¶ 81-85, 117), an exposure assessment (*id.* at ¶¶ 86-92), and a risk characterization (*id.* at ¶¶ 93-94, 108, 118).

- (4) Okun concludes that even assuming the exposure limiting assumptions used by Ollson, the arsenic concentrations pose an unacceptable cancer risk to humans. (*Id.* at ¶ 120). This conclusion is supported by Okun's opinion concerning the permissible level of excess cancer risk and his criticism of Ollson's opinions concerning the permissible level of excess cancer risk. (*Id.* at ¶¶ 59, 93-94, 104).

The first category of information contained in the Second Okun Report concerns his opinion that the arsenic concentrations in the football field pose a significant risk to the environment. This information was contained in Okun's original report (Docket # 65-10 at ¶ PP), although Okun has expanded his discussion concerning DEC guidance pertaining to ecological soil cleanup objectives. (Docket # 69-25 at ¶¶ 43-48). The Second Okun Report fails to cure the deficiencies contained in the original Okun report with respect to this opinion. As set forth above, although Okun's original report compared the arsenic concentrations to the state ecological soil cleanup objectives, Okun conceded that he did not conduct an environmental risk assessment. Nothing in the Second Okun Report suggests that Okun has since conducted such an assessment. Accordingly, his opinion regarding the potential risk of arsenic concentrations to the environment must be precluded because it is still unsupported by reliable scientific methodology.

Okun's opinion regarding the environmental risk posed by concentrations of lead, DDD, DDT or DDE suffers from the same deficiencies. As an initial matter, it is undisputed that Okun did not conduct any assessment involving these toxins in his original report. Indeed, Okun conceded during his deposition that the only soil concentration that he analyzed was the arsenic concentration in the soil at the Park. Accordingly, Okun's opinions concerning DDT, DDD and

DDE do not elaborate upon prior opinions, but instead are untimely opinions. Further, the opinion is based upon Okun's comparison of the relevant concentrations against the state soil cleanup objectives, with no accompanying risk assessment. Accordingly, even if timely disclosed, the opinion would be subject to preclusion under Rule 702 of the Federal Rules of Evidence.

The third relevant category of information contains Okun's opinion concerning the risk that the arsenic concentrations pose to human health. This opinion is primarily supported by a human health risk assessment of the concentrations of arsenic in the soil at the Park. (*Id.* at ¶¶ 86-92). In the Second Okun Report, he appears to use the same methodology to assess the risk to human health, although he has broadened his explanation of that methodology. (*Id.* at ¶¶ 55-59, 80-94). In conducting the assessment, Okun altered several assumptions and included a calculation for arsenic absorbed through dermal contact, in addition to arsenic ingested orally. (Docket # 69-36). In addition, the Second Okun Report contains a lengthy discussion of the appropriate limiting exposure assumptions that should be incorporated into the assessment, along with criticisms of the limiting assumptions used by Ollson. (*Id.* at ¶¶ 50-54, 58).

Although Okun's general opinion in both reports is that the arsenic concentrations pose a risk to human health, his previous opinion was based upon significantly different calculations and assumptions. Indeed, the only identifiable exposure assumption that the two opinions share is the residential exposure assumption, which this Court has determined to be unreasonable. (*Compare* Docket # 65-10 at ¶ FF (considering potential future uses including residential use) *with* Docket # 69-25 at 17 ("my exposure assessment dated February 2014 has adopted the exposure parameters typically used by the USEPA for evaluating unrestricted future

site use when residential use is possible’’)). Accordingly, I conclude that the human health risk assessment contained in the Second Okun Report is an untimely new opinion because it is supported by different calculations and assumptions. Further, portions of his new opinion constitute untimely rebuttal. In any event, even if the Court determined that preclusion was not the appropriate sanction for the untimely disclosures, the human health risk opinion should be precluded because it rests upon the same invalid residential use assumption that doomed the first opinion on the same subject.

The final category of relevant information contained in the Second Okun Report concerns Okun’s opinion about the acceptable level of excess cancer risk. According to Okun, the acceptable level of risk is 1 in one million (or 1×10^{-6}). (Docket # 69-25 at ¶ 104). Okun maintains that he and Ollson agree that the EPA has promulgated a range of potentially acceptable cancer risks between 1×10^{-4} and 1×10^{-6} . (*Id.* at ¶ 59). Okun criticizes Ollson for using the least protective value of 1×10^{-4} in his analysis. (*Id.*). Instead, according to Okun, excess cancer risks greater than 1×10^{-6} should be considered unacceptable. (*Id.*). Okun notes that Ollson’s calculations yield an excess cancer risk from arsenic to athletes, spectators and recreational users of the football field of 4×10^{-6} . (*Id.* at ¶ 120). Although Okun disagrees with the limiting assumptions used by Ollson, Okun opines that even under Ollson’s calculations the arsenic concentrations in the football field result in an unacceptable excess cancer risk to humans. (*Id.*).

Okun’s original report does not identify an excess cancer risk of 1×10^{-6} as unacceptable. Instead, his report appears to opine that risk levels in excess of 1×10^{-4} are unacceptable. (Docket # 65-10 at ¶ KK). During his deposition, Okun testified that the standard level for comparison in New York was 1×10^{-6} , but he did not testify that levels greater than that

amount would necessarily constitute an unacceptable level of risk. Further, he did not discuss in his original report or his deposition testimony Ollson's calculations and his opinion that even under Ollson's calculations there was an unacceptable excess cancer risk. Accordingly, I conclude that Okun's opinion concerning the acceptable level of excess cancer risk was not previously disclosed and constitutes an untimely rebuttal opinion.

(ii) The Okun Affidavit

Several paragraphs in the Okun Affidavit merely compare the methodology to assess human health risk in Okun's original report with the methodology used in Ollson's report. (Docket # 69-41 at ¶¶ 4-10). Several other paragraphs criticize Ollson's human health risk assumptions or provide further explanation for Okun's original assumptions. (*Id.* at ¶¶ 11-22, 28-30). I conclude that the paragraphs that merely compare methodology or provide further explanation for Okun's original assumptions (*id.* at ¶¶ 4-10, 21-22, 28-30) merely elaborate upon Okun's original report and testimony and will consider them in connection with the pending motions. *See Harkabi v. SanDisk Corp.*, 2012 WL 2574717 at *3-4 (“[Rule] 26(a)(2)(B) does not limit an expert's testimony simply to reading his report[;] . . . [t]he rule contemplates that the expert will supplement, elaborate upon, explain and subject himself to cross-examination upon his report”) (quotation omitted). The remaining paragraphs criticize Ollson's human health risk assumptions and constitute untimely rebuttal. (*Id.* at ¶¶ 11-20).

The Okun Affidavit also discusses the acceptable level of excess cancer risk. (*Id.* at ¶¶ 23-27). As discussed above, this information was not previously disclosed and constitutes untimely rebuttal.

Finally, the Okun Affidavit expands upon the effectiveness of the sod covering on the football field. (*Id.* at ¶¶ 36-40). In his original report, Okun contended that EPA guidance

supported his conclusion that “[t]he presence of a partial grass cover on the football field does not alter the health and environmental risk posed by arsenic in the soil[;] [t]he grass cover is an incomplete and temporary barrier to human exposure and soil erosion . . . [and] [is] not considered to reduce long term risk.” (Docket # 65-10 at ¶ MM). I conclude that Okun’s opinion regarding the effectiveness of grass cover was timely disclosed and the discussion in his affidavit merely elaborates upon that statement. Accordingly, those portions of the Okun affidavit will not be stricken and will be considered in connection with the summary judgment motion.

(iii) **The Day Affidavit**

Finally, I turn to the Day Affidavit. In his report, Day indicated that he visited the Park between 2011 and 2012. (Docket # 65-4 at 8). I conclude that the statements contained in his affidavit concerning his observations during his visits to the Park (Docket # 69-40 at ¶ 2) merely elaborate upon his original report and may be considered in connection with the summary judgment motion. I conclude that Day’s assertions in his affidavit that he implicitly considered the definition of solid waste under RCRA directly contradicts his deposition testimony that he did not consider that definition when issuing his report. Accordingly, Day’s opinions concerning the RCRA definition of solid waste will not be considered in connection with the summary judgment motion. *See Hayes v. New York City Dep’t of Corr.*, 84 F.3d 614, 619 (2d Cir. 1996) (“a party may not create an issue of fact by submitting an affidavit in opposition to a summary judgment motion that, by omission or addition, contradicts the affiant’s previous deposition testimony”). The remaining sections of Day’s affidavit contain new opinions concerning Chatfield sampling data, the Town’s management practices (Docket # 69-40 at ¶¶ 5-7), or information seemingly designed to bolster Okun’s opinions (*Id.* at ¶¶ 8-14).

b. Substantial Justification and Harmlessness

As identified above, the following information contained in the Second Okun Report and the Okun and Day Affidavits is untimely under Rule 26(a) (the “untimely disclosed opinions”):

- (1) Okun’s previously undisclosed opinion that excess cancer risks greater than 1×10^{-6} are unacceptable and his conclusion that Ollson’s calculations produce an excess cancer risk to humans that exceeds acceptable levels. These opinions are contained in the Second Okun Report and the Okun Affidavit. (Docket ## 69-25 at ¶¶ 59, 93-94, 104, 120; 69-41 at ¶¶ 4-10).
- (2) Okun’s previously undisclosed criticisms of the assumptions used by Ollson when conducting his human health risk assessment. (Docket # 69-41 at ¶¶ 11-20).
- (3) Day’s previously undisclosed opinions concerning Chatfield sampling data and the Town’s management practices. (Docket # 69-40 at ¶¶ 5-7).
- (4) Day’s previously undisclosed opinions concerning regulatory guidance on soil cleanup objectives. (*Id.* at ¶¶ 8-14).

Courts should not impose sanctions under Rule 37(c)(1) “where a party’s failure to comply” with Rule 26(a) or (e) “was ‘substantially justified’ or where the conduct was ‘harmless.’” *Ritchie Risk*, 280 F.R.D. at 158-59. “Substantial justification means justification to a degree that could satisfy a reasonable person that parties could differ as to whether the party was required to comply with the disclosure request.” *Kunstler v. City of New York*, 242 F.R.D. 261, 264-65 (S.D.N.Y. 2007) (internal quotations and citations omitted). “Harmlessness means an absence of prejudice.” *Ritchie Risk*, 280 F.R.D. at 159. The party that failed to comply with its discovery obligations bears the burden of proving that its failure was both substantially justified and harmless. *Id.*

Here, Chart's only proffered justification is that he believed that his expert reports were complete and only recognized the need for supplementation in the course of opposing the Town's "highly technical" arguments in the pending motions. (Docket # 75 at 19). As a general matter, courts should not permit untimely disclosure of new opinions to fill gaps in expert proof, particularly where those gaps are revealed through the opposing party's summary judgment motion. *See Morritt v. Stryker Corp.*, 2011 WL 3876960, *6 (E.D.N.Y. 2011) (expert affidavit submitted in opposition to defendant's summary judgment motion that was "unquestionably designed to fill a significant and logical gap in his expert report" and was produced "only after defendants raised [the] deficiency in their motion . . . constitute[d] a clear violation of Rule 26") (internal quotations omitted). I easily conclude that the failure to produce the untimely disclosed opinions during the discovery period and prior to the filing of dispositive motions was not substantially justified.

Chart also has not satisfied his burden of demonstrating that his untimely disclosure was harmless. The untimely disclosed opinions were provided after the Town's experts had prepared their reports and after both plaintiff's and defendant's experts were deposed. Thus, the Town has not had an opportunity to depose Okun and Day concerning their new opinions. In addition, the Town incurred the expense of additional expert affidavits in further support of its summary judgment motion. (Docket ## 76-3 and 76-4).

c. Appropriate Sanction

The decision whether to issue a preclusion order, or a lesser sanction, is within the discretion of the trial court. *See Design Strategy, Inc. v. Davis*, 469 F.3d 284, 297-98 (2d Cir. 2006). "[P]reclusion of evidence is a harsh remedy, [and] it should be imposed only in rare situations." *Ritchie Risk*, 280 F.R.D. at 156-57 (internal citations and quotations omitted). In

determining whether preclusion or another sanction is appropriate, a court should consider:

“(1) the proponent’s explanation for failing to provide the subject evidence; (2) the importance of such evidence to the proponent’s case; (3) the opponent’s time needed to prepare to meet the evidence; and (4) the possibility of obtaining a continuance to permit the opponent to meet the evidence.” *Turley v. ISG Lackawanna, Inc.*, 803 F. Supp. 2d 217, 229 (W.D.N.Y. 2011) (citing *Outley v. City of New York*, 837 F.2d at 589). “While a showing of ‘bad faith’ is not required for preclusion to be ordered under Rule 37(c), a party’s bad faith ‘can be taken into account’ by the [c]ourt in considering the party’s explanation for its failure to satisfy its discovery obligations.” *Ritchie Risk*, 280 F.R.D. at 157 (quoting *Design Strategy, Inc. v. Davis*, 469 F.3d at 296).

Chart failed without substantial justification to comply with his discovery obligations and – with the exception of Okun’s previously undisclosed opinion that excess cancer risks greater than 1×10^{-6} are unacceptable and thus that Ollson’s calculations yield an excess cancer risk to humans that exceeds acceptable levels – consideration of the above four factors leads me to conclude that preclusion is the appropriate sanction for his conduct. First, Chart has not provided any good reason for his failure to provide the untimely disclosed opinions, a factor weighing in favor of preclusion.

The second factor also weighs in favor of preclusion for the second, third and fourth untimely opinions. Much of the information contained in the Okun and Day Affidavits merely serves to bolster Okun’s opinion, criticizes Ollson or does not otherwise appear essential to Chart’s ability to establish that the soil at the Park constitutes an imminent and substantial threat to human health or the environment. I reach a different conclusion with respect to Okun’s opinions concerning the permissible level of excess cancer risk. Okun’s and Ollson’s reports offer generally consistent methodologies, but are in sharp dispute concerning what use

assumptions may properly be incorporated into the analysis. Okun's new opinion states that even accepting Ollson's use assumptions, the soil at the Park poses an unacceptable risk to human health. This opinion could prove critical to Chart's ability to prosecute his claim. This factor weighs heavily against preclusion of Okun's opinion concerning the permissible level of cancer risk.

Although the Town has been prejudiced by Chart's failure to timely disclose Okun's opinion, the Town has submitted affidavits from its experts to address Okun's previously undisclosed opinion. (Docket ## 76-3; 76-4). Further, much of the prejudice to the Town may be cured through reopening expert discovery. Finally, no trial date has been set. Thus, a continuance to allow the Town to conduct limited discovery related to the new opinion and to supplement its expert reports (if necessary) is not unreasonable. *See Safespan Platform Sys., Inc. v. EZ Access, Inc.*, 2011 WL 7473467, *4 (W.D.N.Y. 2011) ("unlike the cases cited by defendants, this discovery issue did not arise at the eve of trial or present a novel theory late in the proceedings"), *report and recommendation adopted*, 2012 WL 777305 (W.D.N.Y. 2012); *see also Boyde v. Monroe Cnty.*, 2011 WL 4457668, *4 (W.D.N.Y. 2011) (preclusion not appropriate sanction where court could grant a continuance by reopening discovery). In sum, the Court will permit Okun to offer his opinion concerning the acceptable level of cancer risk, but will strike the second, third and fourth untimely disclosed opinions identified above.

I conclude that Chart's late disclosure not only justifies the reopening of the expert discovery period to allow the Town to conduct additional discovery relating to the untimely disclosure, *see Boyde v. Monroe Cnty.*, 2011 WL 4457668 at *4, but also justifies the imposition of fee shifting for any supplemental expert reports and discovery, *see Ritchie Risk*, 280 F.R.D. at 157 (where a party's failure to comply with its discovery obligations causes an

opposing party to incur additional expenses, those expenses may properly be shifted to the non-compliant party).

For the reasons set forth above, I direct that:

- (1) the parties confer regarding the Town's additional expert discovery and the Town's supplemental expert reports, if any, and jointly propose to this Court by no later than **fourteen (14) days from the entry of this Decision and Order** an amended scheduling order setting deadlines for such expert discovery; and
- (2) Chart reimburse the Town's expert's fees and expert's costs resulting from any additional discovery and supplemental reports.

II. The Town's Motion for Summary Judgment

The Town seeks summary judgment dismissing the complaint in its entirety. First, the Town contends that the topsoil does not fall within the RCRA definitions of "solid waste" or "hazardous wastes" and therefore Chart cannot establish a RCRA claim under 42 U.S.C. § 6972(a)(1)(B). (Docket # 66 at 4-10). The Town further contends that it is entitled to summary judgment because Chart is unable to establish that the topsoil presents an imminent and substantial threat to human health or the environment. (*Id.* at 10-23). According to the Town, its expert proof establishes that the topsoil does not present an imminent or substantial threat to health or the environment. (*Id.* at 11-15). Further, the Town maintains that Chart has not presented sufficient evidence to create an issue of fact disputing the Town's evidence. (*Id.* at 15). The Town contends that if Okun is precluded from testifying, Chart cannot proffer any evidence to support his claim that the topsoil poses a threat to health or the environment. (*Id.* at 21-22). In addition, the Town contends that Chart is bound by the determination of New York regulatory agencies that no further action was required with respect to the Crowley site. (*Id.* at

14-15). Finally, the Town contends that Chart has failed to establish that he has standing to complain of the soil concentrations at the Park. (*Id.* at 23-26). According to the Town, Chart has not produced any evidence to establish that the soil concentrations at the Park pose any danger to an adult and therefore Chart is unable to establish standing. (*Id.*).

Chart maintains that genuine issues of material fact preclude summary judgment. (Docket # 69-45). First, Chart contends that the topsoil used at the Park qualifies as both a “solid waste” and as a “hazardous waste” under RCRA. (*Id.* at 4-7, 25). In addition, Chart maintains that a material factual dispute exists as to whether the topsoil presents an imminent or substantial threat to human health or the environment. (*Id.* at 8-11). Finally, Chart maintains that he has sufficiently established standing. (*Id.* at 19-26).

A. Factual Background

The following facts are undisputed unless otherwise noted. The Park consists of 156 acres of land located in Parma, New York, containing football, baseball and soccer fields, tennis courts, pavilions and other recreational areas including a nature trail. (Docket ## 65-1 at ¶ 5; 69 at ¶ 5). In 2003, the Town renovated portions of the Park, including the football field. (Docket ## 65-1 at ¶ 11; 69 at ¶ 11). Specifically, the Town added a “crown” to the top of the football field. (Docket ## 65-1 at ¶ 12; 69 at ¶ 12). The “crown” consisted, at least in part, of unscreened topsoil purchased from Crowley in the spring of 2003. (Docket ## 65-1 at ¶¶ 13-16, 25; 69 at ¶¶ 13-16, 23). The topsoil was spread and graded in June of 2003, and the entire field was hydroseeded in August 2003. (Docket ## 65-1 at ¶¶ 17-18; 69 at ¶¶ 17-18).

The topsoil purchased from Crowley came from property owned by Crowley (the “Crowley Site”) that Crowley developed into a residential housing development between 2000 and 2006. (Docket ## 65-1 at ¶ 21; 69 at ¶ 21). Before Crowley purchased the land, the

Crowley Site was used as an apple orchard. (Docket ## 65-1 at ¶ 22; 69 at ¶ 22). During the course of its development efforts, Crowley amassed a surplus of topsoil from the construction of the housing development. (Docket ## 65-1 at ¶ 24; 69 at ¶ 24). Developers such as Crowley typically sell the surplus topsoil generated during their development projects. (Docket ## 65-1 at ¶ 23; 69 at ¶ 23).

On July 30, 2003, Crowley was notified that its excess topsoil contained concentrations of lead and arsenic at levels above natural background levels, apparently as a result of historic pesticide use, including lead arsenate. (Docket ## 65-1 at ¶ 26; 69 at ¶ 26). At that time, Crowley had already sold topsoil to fifty-five other persons or entities, including the Town. (Docket ## 65-1 at ¶ 24; 69 at ¶ 24). On August 5, 2005, Crowley and the DEC entered into a consent order regarding the topsoil. (Docket ## 65-1 at ¶ 27; 69 at ¶ 27). In the consent order, the DEC took the position that the topsoil from the Crowley Site was contaminated and constituted a solid waste under New York regulations. (Docket ## 65-1 at ¶ 30; 69 at ¶ 30).

At the time that the consent order was entered, Crowley was completing its third phase of the residential development project at the Crowley Site. (Docket ## 65-1 at ¶ 28; 69 at ¶ 28). The consent order required Crowley to segregate the onsite topsoil in accordance with an agreed-upon soil management plan, and a deed restriction was issued. (*Id.*). According to Chart, the consent order also required Crowley to segregate, cover, seed, fence, placard, and inspect and maintain the contaminated onsite topsoil. (Docket # 69 at ¶ 28). The consent order did not require Crowley to take any action with respect to its two earlier phases of residential development or with respect to the purchasers to which it had sold the topsoil, although one of the sites that received the soil did take some remedial measures in conjunction with oversight

from the Monroe County Health Department (“MCHD”). (Docket ## 65-1 at ¶¶ 29, 31; 69 at ¶¶ 29, 31).

In February 2009, during a meeting of the Town’s board, Chart informed the Town of the potential arsenic contamination in the topsoil at the Park. (Docket ## 65-1 at ¶ 46; 69 at ¶ 46). In 2009 and 2010, both Chart and the Town conducted sampling on the topsoil at the Park. (Docket ## 65-1 at ¶¶ 49-54, 58, 62; 69 at ¶¶ 49-54, 58, 62). In addition, the Town engaged Chatfield to prepare a work plan consisting of sampling and analysis to submit for approval to MCHD, DOH and DEC (the “Agencies”). (Docket ## 65-1 at ¶ 57; 69 at ¶ 57). The work plan was reviewed by the DEC, revised and finalized in early March 2010. (Docket ## 65-1 at ¶¶ 60-61; 69 at ¶¶ 60-61). On approximately March 26, 2010, Chatfield took additional soil samples from the football field in accordance with the work plan. (Docket ## 65-1 at ¶ 62; 69 at ¶ 62).

The results of that sampling were reviewed by the Agencies. (Docket ## 65-1 at ¶ 65; 69 at ¶ 65). In response, on May 25, 2010, the DOH issued a letter to the Town stating that arsenic was present in the soil of the football field above levels typically found in New York State. (*Id.*). The letter further stated that there appeared to be sufficient grass cover to provide a barrier to exposure to the arsenic concentrations, but because of reasonable wear and tear expectations, the Town should consider steps to minimize the potential for human exposure. (*Id.*). The DOH did not require the Town to take any further action, but suggested that the Town consider additional measures, including disposing of the top six to twelve inches of the soil, installing a demarcation layer on top of the field and backfilling with six to twelve inches of clean soil, and conducting additional sampling. (Docket ## 65-1 at ¶ 66; 69 at ¶ 66).

On March 8, 2011, the Town met with its environmental consultant, Chart and his environmental consultant, and representatives from the Agencies. (Docket ## 65-1 at ¶ 69; 69 at ¶ 69). The purpose of the non-binding meeting was to discuss technical decisions and recommendations made by the Agencies. (*Id.*). On May 2, 2011, the DEC issued a letter to the Town, which stated that the DEC, MCDH and DOH had completed an “extensive evaluation and consultation” of the football field at the Park, which supported “the determination that the field does not pose an environmental threat, it does not require additional action, and can be used for its intended purpose.” (Docket ## 65-1 at ¶¶ 70-71; 69 at ¶¶ 70-71).

On October 4, 2012, the Town requested that its consultant take additional soil samples and have those samples undergo a Toxicity Characteristic Leaching Procedure (“TCLP”) for lead and arsenic. (Docket ## 65-1 at ¶ 74; 69 at ¶ 74). The TCLP test results indicated that the samples were well below the TCLP threshold for lead and arsenic. (*Id.*).

B. Discussion

Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). In reaching this determination, the court must assess whether there are any disputed material facts and, in so doing, must resolve all ambiguities and draw all reasonable inferences against the moving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248-49 (1986); *Coach Leatherware Co., Inc. v. AnnTaylor, Inc.*, 933 F.2d 162, 166-67 (2d Cir. 1991). A fact is “material” only if it has some effect on the outcome of the suit. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. at 248; *Konikoff v. Prudential Ins. Co. of Am.*, 234 F.3d 92, 97 (2d Cir. 2000). A dispute regarding a material fact is genuine “if the evidence is such that a reasonable

jury could return a verdict for the nonmoving party.” *Anderson*, 477 U.S. at 248; *see also Konikoff v. Prudential Ins. Co. of Am.*, 234 F.3d at 97.

The moving party bears the initial burden of demonstrating the absence of a genuine issue of material fact, after which the non-moving party must come forward with sufficient evidence to support a jury verdict in its favor; the motion will not be defeated based upon conjecture, surmise or the existence of “metaphysical doubt” concerning the facts. *Bryant v. Maffucci*, 923 F.2d 979, 982 (2d Cir. 1991) (citing *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986)). The party seeking to avoid summary judgment “must do more than make broad factual allegations and invoke the appropriate statute. The [party] must also show, by affidavits or as otherwise provided in Rule 56 . . . , that there are specific factual issues that can only be resolved at trial.” *Colon v. Coughlin*, 58 F.3d 865, 872 (2d Cir. 1995); *see also Driscoll v. Townsend*, 60 F. Supp. 2d 78, 80 (W.D.N.Y. 1999).

As the Second Circuit has explained:

[T]he trial court’s task at the summary judgment motion stage of the litigation is carefully limited to discerning whether there are any genuine issues of material fact to be tried, not to deciding them. Its duty, in short, is confined at this point to issue-finding; it does not extend to issue-resolution. . . . [I]t must be kept in mind that only by reference to the substantive law can it be determined whether a disputed fact is material to the resolution of the dispute.

Gallo v. Prudential Residential Serv., Ltd. P’ship, 22 F.3d 1219, 1224 (2d Cir. 1994).

1. Solid Wastes

RCRA is a “cradle-to-grave” regulatory scheme governing the “treatment, storage and disposal of solid and hazardous wastes.” *Connecticut Coastal Fishermen’s Ass’n v. Remington Arms Co.*, 989 F.2d 1305, 1313 (2d Cir. 1993); *see Meghrig v. KFC W., Inc.*, 516 U.S. 479, 483 (1996) (“RCRA is a comprehensive environmental statute that governs the

treatment, storage, and disposal of solid and hazardous waste”). “RCRA’s primary purpose . . . is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated, so as to minimize the present and future threat to human health and the environment.”” *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d at 205 (internal quotations omitted) (quoting *Meghrig v. KFC W., Inc.*, 516 U.S. at 483).

RCRA defines solid waste as “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material . . . resulting from industrial, commercial, mining and agricultural operations, and from community activities.”¹² 42 U.S.C. § 6903(27). The statute does not define the term “discarded material,” but the Second Circuit has held that material is “discarded” within the meaning of RCRA when it “has served its intended purpose.” *No Spray Coalition, Inc. v. City of New York*, 252 F.3d 148, 150 (2d Cir. 2001); see *Connecticut Coastal Fishermen’s Ass’n*, 989 F.2d at 1316 (“the EPA states that the materials are discarded because they have been left to accumulate long after they have served their intended purpose”) (internal quotation omitted). The Second Circuit has declined to determine how long a material must accumulate before it is deemed discarded. *Connecticut Coastal Fishermen’s Ass’n*, 989 F.2d at 1316.

The Ninth Circuit has identified the following three factors to consider in determining whether a substance is discarded within the meaning of RCRA:

- (1) whether the material is destined for beneficial reuse or recycling in a continuous process by the generating industry itself;
- (2) whether the materials are being actively reused, or whether they merely have the *potential* of being reused; and

¹² RCRA regulations also contain a definition for solid waste that is narrower than the statutory definition. *Connecticut Coastal Fishermen’s Ass’n v. Remington Arms Co.*, 989 F.2d at 1314-15. The broader statutory definitions apply to the citizen imminent hazard claim asserted by Chart in this action. See *id.* at 1316 (“RCRA regulations apply the broader statutory definition of solid waste to imminent hazard suits”).

- (3) whether the materials are being reused by its original owner, as opposed to use by a salvager or reclaimer.

Safe Air for Everyone v. Meyer, 373 F.3d 1035, 1043 (9th Cir. 2004) (internal quotations and citations omitted), *cert. denied*, 544 U.S. 1018 (2005). These factors are meant to guide the analysis; however, no single factor is determinative. *See Safe Food & Fertilizer v. E.P.A.*, 350 F.3d 1263, 1268 (D.C. Cir. 2003) (“[w]e have . . . held that materials destined for future recycling by another industry *may* be considered ‘discarded’; . . . [b]ut we have never said that RCRA compels the conclusion that material destined for recycling in another industry is necessarily ‘discarded’”), *rehearing granted in part and remand ordered on other grounds*, 365 F.3d 46 (D.C. Cir. 2004). Similarly, whether the substance has market value is a factor to be considered, but is not dispositive. *Oklahoma v. Tyson Foods, Inc.*, 2010 WL 653032, *11 (N.D. Okla. 2010) (“[i]n determining whether a material is a ‘beneficial’ product or a RCRA solid waste, courts have examined whether the material has market value, and whether the party intended to throw the material away or put it to a beneficial use[;] . . . [n]either of these factors is outcome determinative, but rather each informs the court’s view of the evidence”). *But see Safe Air for Everyone v. Meyer*, 373 F.3d at 1043 n.8 (suggesting that market value is irrelevant to analysis of solid waste under RCRA).

Both parties agree that the Court must determine whether the contaminated topsoil that was purchased from Crowley and distributed at the Park was “discarded” within the meaning of RCRA. (Docket ## 66 at 4; 69-45 at 4-5). The Town asserts that the Crowley Site had been used as an apple orchard until it was developed into a residential community. (Docket # 66 at 6-7). During the development, excess topsoil was removed from the site and sold to the Town and other entities. (*Id.*). According to the Town, because it purchased the topsoil and

used it as topsoil on the football field, the topsoil was never discarded and continues to be used in accordance with its intended purpose. (*Id.*).

Chart maintains that it is not the topsoil, but the pesticide residue in the topsoil that is the solid waste. (Docket # 69-45 at 5). According to Chart, the pesticide was applied to the orchards previously grown at the Crowley Site and, at the time it was applied, the pesticide was serving its intended purpose. (*Id.* at 5-6). Crowley subsequently purchased the land and converted the orchard into a housing development. (*Id.*). Crowley stripped the pesticide-contaminated topsoil from the land; at that point, according to Chart, the pesticide-residue contained in the soil ceased to serve its intended purpose. (*Id.* at 6). Further, Chart contends, Crowley discarded the topsoil that was previously used for agricultural purposes when it removed it from the ground and sold it to the Town. (*Id.* at 7-8).

In reply, the Town maintains that the material at issue is topsoil and not pesticide residue. (Docket # 77 at 4). The Town argues that under Chart's reasoning, any topsoil that has naturally occurring levels of pesticide residue would become a solid waste when removed from its original location. (*Id.*). In any event, the Town maintains that the pesticide ceased serving its intended purpose when it landed on the ground and Crowley's acts of removing and relocating the topsoil containing the pesticide did not alter that fact, but the topsoil continued to serve its intended purpose. (*Id.* at 4-5). According to the Town, that the topsoil was relocated from the Crowley Site to the Park is entirely irrelevant. (*Id.* at 6-7). The Town argues that the topsoil had a market value and continued to be used for its intended purpose, as a medium to grow plants. (*Id.* at 4).

As framed by the parties, the solid waste question appears to turn on whether the material at issue is topsoil or pesticide residue. Having thoroughly reviewed the relevant

caselaw, the Court discerns little guidance on the issue of how to define the material in question. After careful consideration, this Court concludes that the fact that the topsoil contained concentrations of pesticide from its use in the agricultural industry may not be ignored. Whether the Court defines the material at issue as pesticide residue or topsoil with concentrations of pesticide, the result is the same – the Court should consider pesticide residue contained within the topsoil that Crowley sold to the Town.

Pesticides are not discarded once they are “sprayed into the air with the design of effecting their intended purpose: reaching and killing [insects].” *No Spray Coalition, Inc. v. City of New York*, 252 F.3d at 150. Instead, pesticides are only discarded, and therefore constitute solid waste, when they have ceased to serve their intended purpose. *See id.*; *see Ecological Rights Found. v. Pac. Gas & Elec. Co.*, 713 F.3d 502, 518 (9th Cir. 2013) (wood preservative applied to poles and “released into the environment as a natural, expected consequent of its intended use” is not “automatically” a solid waste; “we do not decide whether or under what circumstances . . . wood preservative, or another material becomes a RCRA ‘solid waste’ when it accumulates in the environment as a natural, expected consequence of the material’s intended use”); *Connecticut Coastal Fisherman’s Ass’n*, 989 F.2d at 1316 (lead shot and clay target debris from a shooting range that had landed in public water was a solid waste; “[w]ithout deciding how long materials must accumulate before they become discarded – that is, when the shot is fired or at some later time – we agree that the lead shot and clay targets in Long Island Sound have accumulated long enough to be considered solid waste”).

In this case, the pesticide was not discarded when it was sprayed onto the orchard, and it did not become solid waste when it landed on orchard ground, irrespective of whether the pesticide continued to have a beneficial purpose when left to accumulate on the orchard ground.

See Otay Land Co. v. U.E. Ltd., L.P., 440 F. Supp. 2d 1152, 1179-80 (S.D. Cal. 2006) (“EPA disagrees with one commenter’s proposition that munitions are ‘solid waste’ when they hit the ground because they serve no further function, unlike pesticides, which continue to have a function on the ground[;] EPA’s interpretation focuses on whether a product was used as it was intended to be used, not on whether the purpose of the product is to perform some function once on the ground”) (quoting EPA Military Munitions Rule), *aff’d in part and vacated and remanded in part*, 338 F. App’x 689 (9th Cir. 2009). Without determining precisely when it occurred, I find that the pesticide left to accumulate on the ground did become a solid waste – at the latest when Crowley converted the agricultural land into a residential development and removed the soil containing the pesticide from the land. At that point, the pesticide ceased to serve its intended purpose. *See Connecticut Coastal Fishermen’s Ass’n*, 989 F.2d at 1316 (determining that lead shot left to accumulate in public waters for approximately seventy years was a solid waste without determining precisely when during that time period the lead shot became solid waste).

In reaching this conclusion, I disagree with the Town that a reasonable extension of this ruling would render all soils that have naturally occurring levels of pesticide solid wastes. The critical facts underpinning this decision are that (1) the topsoil had been used in an agricultural setting where pesticide was presumably applied in concentrations much greater than would be expected to be found in non-agricultural settings, and (2) the topsoil was then sold to other individuals and entities, including the Town, who were unaware of the pesticide concentrations within the soil. These facts distinguish this case from *Oklahoma v. Tyson Foods, Inc.*, 2010 WL 653032 (N.D. Okla. 2010), upon which the Town relies. In *Tyson Foods*, the defendant sold excess poultry litter from its farming operations to third parties who spread the

litter on their land. *See id.* at *10. The court determined that the poultry litter was not “discarded” because the third parties used the poultry litter as a fertilizer to promote their agricultural enterprises. *See id.* at *10-11. Here, there is no evidence to suggest that the Town (or any other individuals or entities) purchased the pesticide-contaminated topsoil from Crowley believing that the pesticide in the topsoil would serve a beneficial purpose. Indeed, the Town contends that Chart first alerted the Town to the arsenic levels in the soil on February 3, 2009, well after the Town had purchased and distributed the topsoil at the Park.¹³ (Docket # 65-1 at ¶¶ 17, 46).

The Town maintains that the fact that the soil was removed from the Crowley Site and sold to the Town is irrelevant. I disagree. Numerous courts have considered whether a substance is used in the same industry or a separate industry relevant, although not determinative, to the question of whether the material constitutes a solid waste under RCRA. *See Safe Air for Everyone*, 373 F.3d at 1045-46 (grass residue not a solid waste under RCRA in part because it was beneficially reused within the generating industry by its original owners); *Safe Food & Fertilizer v. E.P.A.*, 350 F.3d at 1268 (holding that whether materials are sold for use in another industry is a non-determinative factor to be considered); *Owen Elec. Steel Co. of S. Cal., Inc. v. Browner*, 37 F.3d 146, 150 (D.C. Cir. 1994) (industry byproduct is discarded where it is not immediately reused in the production process and where it is sold to third parties; “EPA is also justified to conclude that, because the slag is sold to others . . . , it is not ‘destined for beneficial reuse or recycling in a continuous process *by the generating industry itself*’”) (quoting *Am. Mining Congress v. United States EPA*, 824 F.2d 1177, 1186 (D.C. Cir. 1987)).

¹³ It is not clear from the record whether this was the first time that the Town learned of pesticide concentrations in the topsoil.

I find that the pesticide-contaminated topsoil is a solid waste under RCRA, and accordingly conclude that the Town is not entitled to summary judgment dismissing the RCRA cause of action on this ground.

2. Hazardous Waste

This Court previously denied the Town's motion for judgment on the pleadings dismissing Chart's RCRA claim to the extent it was based upon allegations that the Town disposed of a "hazardous waste." (Docket # 55). In that decision, the Court set forth at length the relevant legal requirements that Chart would have to meet to claim that the soil at the Park constituted a "hazardous waste" within the meaning of RCRA. (*Id.* at 19-23). The Court ultimately denied the defendant's motion on the grounds that Chart had adequately alleged that the soil would fail the Toxicity Characteristics Leaching Procedure ("TCLP"). (*Id.*) (citing 40 C.F.R. § 261.24(a)).

In its statement of undisputed facts, the Town asserts that it undertook TCLP testing of the soil at the Park for lead and arsenic and that the testing revealed that all samples taken were below the TCLP threshold for lead and arsenic. (Docket # 65-1 at ¶¶ 74-75). Thus, consistent with this Court's prior decision, the Town maintains that it is entitled to judgment dismissing Chart's RCRA claim to the extent it is based upon allegations that the soil constitutes a hazardous (as opposed to solid) waste. (Docket # 66 at 8-10).

In its statement of facts, Chart admits that the soil passed the TCLP test. (Docket # 69 at ¶¶ 74-75). Despite this concession, Chart continues to maintain that the soil at the Park constitutes a RCRA hazardous waste because, according to Chart, it would be a hazardous waste under New York state law. (Docket ## 65-4 at 3 n.1; 69 at ¶ 75; 69-45 at 25). Chart has provided no authority for the proposition that a substance constitutes a hazardous waste within

the meaning of RCRA merely because it constitutes a hazardous waste under state law. In the absence of such authority, in light of Chart's concession that the soil at the Park passed the TCLP testing and based upon the legal authority set forth in this Court's prior decision, the Court grants the Town's motion seeking dismissal of Chart's RCRA claim to the extent it is based upon allegations that the soil at the Park constitutes a RCRA hazardous waste.

3. Collateral Estoppel

In a single paragraph of its lengthy memorandum of law in support of its motion for summary judgment, the Town maintains that Chart is collaterally estopped from maintaining a citizen's suit under RCRA because the DEC issued a letter indicating that the DEC, MCHD and DOH would not require any additional action at the Park.¹⁴ (Docket # 66 at 14-15).

According to the Town, because Chart did not challenge the letter, which it contends constituted a "final agency determination," Chart is now estopped from litigating the same issue before this Court. (*Id.*). Collateral estoppel may be invoked where "(1) the identical issue was raised in the previous proceeding; (2) the issue was actually litigated and decided in the previous proceeding; (3) the party had a full and fair opportunity to litigate the issue; and (4) the resolution of the issue was necessary to support a valid and final judgment on the merits." *Interoceanica Corp. v. Sound Pilots, Inc.*, 107 F.3d 86, 91 (2d Cir. 1997) (internal quotations omitted). "The party asserting collateral estoppel bears the burden of demonstrating that it is entitled to this relief." *May Ship Repair Contracting Corp. v. Barge Columbia New York*, 160 F. Supp. 2d 594, 599 (S.D.N.Y. 2001).

¹⁴ The Town substantially expanded its collateral estoppel arguments on reply, significantly hampering Chart's ability to respond to them. Arguments are not properly raised for the first time on reply. *See, e.g., Howard v. Cannon Indus., Inc.*, 2012 WL 5373458, *4 n.4 (W.D.N.Y. 2012) (citing *In re Dobbs*, 227 F. App'x 63, 64 (2d Cir. 2007) ("[w]e think that it was entirely proper for the [court] to decline to consider . . . argument[s] raised for the first time in [a] reply brief")).

The Town has failed to meet its burden. The Town has not provided the Court with persuasive support for its contention that a letter from state administrative agency representatives issued after an informal, non-binding meeting discussing state agency policies and after the commencement of a federal lawsuit precludes that lawsuit under the RCRA statute.¹⁵ Having failed to satisfy its burden, the Town is not entitled to summary judgment on the grounds of collateral estoppel.

4. Substantial and Imminent Threat to Health or Environment

As relevant to this case, the RCRA citizen suit provision authorizes a private cause of action against anyone who has contributed to the disposal of any solid or hazardous waste that “may present an imminent and substantial endangerment to health or the environment.” 42 U.S.C. § 6972(a)(1)(B). According to the Second Circuit, the “imminent and substantial endangerment” standard is broad and “is intended to confer upon the courts the authority to grant affirmative equitable relief to the extent necessary to eliminate *any risk* posed by toxic wastes.” *Cordiano*, 575 F.3d at 210 (quoting *Dague v. City of Burlington*, 935 F.2d 1343, 1355 (2d Cir. 1991), *judgment rev’d in part on other grounds*, 505 U.S. 557 (1992)). The Town contends that it has established, through its expert proof, that the topsoil at the Park does not present an imminent and substantial threat to health or the environment. (Docket # 66 at 10-14). Further, the Town maintains that if Okun is precluded from testifying, Chart is unable to create an issue of fact precluding summary judgment on the issue of substantial and imminent harm. (*Id.* at 21-22). The Town also maintains that even if Okun were not precluded, the

¹⁵ In general, federal courts should give a state administrative agency’s factual determinations the same issue and claim preclusive effect in federal court that the agency’s determinations would receive in the state courts if the state administrative agency made the determinations while acting in a judicial capacity. *Kosakow v. New Rochelle Radiology Assocs., P.C.*, 274 F.3d 706, 728 (2d Cir. 2001). A state administrative agency’s determination will not be given preclusive effect where Congress has indicated an contrary intent. *See id.* (citing *Univ. of Tenn. v. Elliott*, 478 U.S. 788, 795-96 (1986)). RCRA contains specific provisions addressing whether a state administrative action bars citizen suits. *See* 42 U.S.C. § 6972(b)(2)(C)(i). Neither party has addressed whether and to what extent these provisions determine or affect the collateral estoppel question.

information contained in his original report does not create an issue of fact as to substantial and imminent harm. (*Id.* at 22-23).

In opposition, Chart maintains that Okun's human health risk assessment creates an issue of fact precluding summary judgment.¹⁶ (Docket # 69-45 at 8-11). In addition, Chart maintains that Ollson's human health risk assessment creates an issue of fact precluding summary judgment. (Docket # 69-45 at 10-11). Of course, that contention is solely supported by Okun's rebuttal opinion that excess cancer risks greater than 1×10^{-6} represent an unacceptable level of risk. As discussed at length above, Okun's rebuttal opinion was untimely disclosed, and the Town has not been afforded the opportunity to conduct discovery relating to that opinion. Further, the Town has not been afforded the opportunity to submit expert reports to rebut Okun's untimely disclosed opinion.¹⁷ I conclude that the Town should be permitted to complete this discovery and brief the issue of substantial and imminent harm with the benefit of that discovery. Accordingly, on the current record, the Court denies the Town's motion for summary judgment without prejudice to renewal in the event that the Town concludes, after any additional discovery has been completed, that no issues of fact exist precluding summary judgment notwithstanding this Court's determination that Okun may offer his opinion of the health risk posed to children using the field. Any such motion shall be filed by no later than thirty days after the completion of the limited discovery authorized by this decision.

¹⁶ To the extent that Chart also contends that Okun's environmental risk assessment created a triable issue of fact as to whether the topsoil poses a substantial and imminent endangerment to the environment, Okun has been precluded from testifying on this topic.

¹⁷ As noted above, the Town has submitted affidavits from its experts in response to the information contained in the Second Okun Report and the Day and Okun Affidavits. (Docket ## 76-3, 76-4). Although any rebuttal reports would likely contain similar information, the Town should be permitted to submit expert reports to rebut that information.

5. Standing

This Court previously determined that Chart had adequately alleged standing when it denied the Town's motion for judgment on the pleadings. (Docket # 55). The Town contends that the Court should revisit its previous decision because Chart must do more at the summary judgment stage of the litigation than merely allege injury, he must also present some proof to suggest that an injury exists. (Docket # 66 at 23-26). The Town contends that at best Chart has offered evidence of a risk of harm to children using the football field at the Park, but not to himself, and therefore he has not established standing. (*Id.*). The Town's argument ignores the fact that its own expert has opined that the arsenic concentrations at the football field resulted in carcinogenic risks in excess of 1×10^{-6} for potential receptors, including athletes, cheerleaders, coaches, spectators and outdoor park workers. (Docket # 65-14 at ¶ 31 and Table 4-2). Although the parties dispute whether this level of risk is acceptable, the Court has denied the Town's motion for summary judgment on this issue pending completion of additional discovery. The Court perceives no reason to revisit its previous determination denying the Town's motion for judgment on the pleadings dismissing Chart's complaint for lack of standing. (Docket # 55).

CONCLUSION

For the reasons discussed above, the Town's motion to preclude and for summary judgment (Docket # 65) is **GRANTED in PART and DENIED in PART**. The Town's motion

to strike the Second Okun Report and the Day and Okun Affidavits (**Docket # 70**) is **GRANTED**
in PART and DENIED in PART.

IT IS SO ORDERED.

s/Marian W. Payson

MARIAN W. PAYSON
United States Magistrate Judge

Dated: Rochester, New York
September 30, 2014